

**Appendix A:
City of Enumclaw Critical Areas Regulations
for the Shoreline Master Program**

Chapter 19.02 CRITICAL AREAS REGULATIONS

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Article I. General Provisions

19.02.005 Definitions. The definition of terms used in the Chapter are provided in Appendix D: Critical Areas Definitions.

19.2.10 Policy, Goals, Purpose, and Intent.

A. Policy: It is the policy of the City of Enumclaw (City) to require site evaluation, planning and review prior to project permitting and construction to:

- (1) avoid or minimize damage to critical areas wherever possible;
- (2) recognize and respond to the need for flood control and flood-resistant building practices within frequently flooded areas;
- (3) identify and regulate geologically hazardous areas that either are not suited for, or would probably impose significant limitations on, building construction, road construction or disturbance and be consistent with public health and safety concerns;
- (4) identify and protect aquifer recharge areas for aquifers used for potable water;
- (5) require that land use activities not dependent upon the location of a critical area be located in areas outside of the identified or delineated critical area and its associated buffer;
- (6) achieve no net loss of wetland function and value by requiring restoration or enhancement of degraded wetlands or creation of new wetlands to offset losses that are unavoidable;
- (7) define and protect fish and wildlife habitat conservation areas; and
- (8) be consistent with public health and safety concerns.

B. Goals. By regulating land use activities within critical areas and their attendant buffers, this Chapter seeks to:

1. Protect members of the public and public resources and facilities from injury, loss of life, or property damage due to landslides and steep slope failures, erosion, seismic events, volcanic eruptions, or flooding;
2. Maintain healthy, functioning ecosystems through the protection of unique, fragile, and valuable elements of the environment, including ground and surface waters, wetlands, and fish and wildlife and their habitats, and to conserve the biodiversity of plant and animal species;
3. Direct activities not dependent on critical areas resources to less ecologically sensitive sites and mitigate unavoidable impacts to critical areas by regulating alterations in and adjacent to critical areas;
4. Allow modification and/or obliteration of low function and value wetland, stream, and wildlife habitats in conjunction with off-site mitigation and restoration in designated areas where the addition of created and/or enhanced habitats will increase fish and wildlife production, public benefits, and economic viability in the City limits and urban growth areas; and
5. Prevent cumulative adverse environmental impacts to water quality, wetlands, and fish and wildlife habitat, and the overall net loss of wetlands, frequently flooded areas, and habitat conservation areas.

C. Purpose: The purpose of this Chapter is to protect the public health, safety, and welfare of the citizens of the City as well as the critical areas regulated within the City by:

1. defining, designating, and classifying ecologically sensitive and hazardous areas to be regulated in the City;
2. providing City officials with information to evaluate, approve, condition, or deny public or private development proposals based upon the regulations outlined in this Chapter;
3. enforcing the regulations outlined in this Chapter to prevent the adverse impacts of development within and adjacent to critical areas;
4. protecting the public against critical area losses due to:
 - a. unnecessary maintenance and replacement of public facilities, including the dredging of ports and navigation channels;

- b. publicly funded mitigation of avoidable impacts;
 5. protecting the private property rights of property owners in the City by alerting appraisers, assessors, owners, and potential buyers or lessees to the development limitations of critical areas;
 6. providing alternative enforcement strategies, incentives, and/or compensation to property owners whose property would be rendered partially or fully undevelopable due to the enforcement of the regulations outlined in this Chapter, and who, by cooperating with the City in implementing the regulations outlined in the Chapter rather than pursuing reasonable use alternatives, allow for a net improvement in the regulated critical area's habitat quality and wildlife/fish production;
 7. protecting, enhancing, restoring, and mitigating impacts to regulated critical areas and their functions and values, while also allowing for reasonable use of private property and economic viability in the City.
 8. implementing the current goals, policies, guidelines, and requirements of the City's Comprehensive Plan, the State of Washington (State) Growth Management Act, and the State Environmental Policy Act (SEPA); as well as all updated (future) versions of City environmental regulations and community (or comprehensive) plans, applicable State community development and environmental regulations, and applicable Federal regulations.
- D. Intent:** The regulations detailed in this Chapter are intended to provide the City a basis for protecting, restoring, enhancing, and/or obliterating (with approved mitigation) the designated and classified critical areas in accordance with the Shoreline Management Act and through the application of the best available science, as determined according to WAC 365-195-900 through 365-195-925, and in consultation with state and federal agencies and other qualified professionals.

In addition, it is the intent of the city that activities in or affecting wetlands not threaten public safety, cause nuisances, or destroy or degrade natural wetland functions and values by:

1. Impeding flood flows, reducing flood storage capacity, or impairing natural flood control functions, thereby resulting in increased flood heights, frequencies, or velocities on other lands;
2. Increasing water pollution through location of domestic waste disposal systems in wetlands, unauthorized application of pesticides and herbicides, disposal of solid waste at inappropriate sites, creation of unstable fills, or the destruction of wetland soils and vegetation;
3. Increasing erosion;
4. Decreasing breeding, nesting, and feeding areas for many species of waterfowl and shorebirds, including those rare and endangered;
5. Interfering with the exchange of nutrients needed by fish and other forms of wildlife;
6. Decreasing habitat for fish and other forms of wildlife;
7. Adversely altering the recharge or discharge functions of wetlands, thereby impacting ground water or surface water supplies;
8. Significantly altering wetland hydrology and thereby causing either short or long term changes in vegetative composition, soils characteristics, nutrient cycling, or water chemistry;
9. Destroying sites needed for education and scientific research, such as outdoor biophysical laboratories, living classrooms, and training areas; or
10. Destroying or damaging aesthetic and property values, including significant public view sheds.

19.2.20 Applicability, Regulated Activities, and Exempt Activities.

- A. All regulated activities in shoreline jurisdiction shall be subject to the provisions of this Chapter. The provisions of this Chapter shall apply to all lands, all land uses, and development activities, and all structures and facilities in shoreline jurisdiction, whether or not a permit or authorization is required, and shall apply to every person, firm, partnership, corporation, group, governmental agency, or other entity that owns, leases, or administers land within the City. No person, company, agency, or applicant shall alter a critical area or its associated buffer except as consistent with the purposes and requirements of this Chapter and as authorized by the Administrator.
1. **Regulated Activities:** Regulated activities include, but are not limited to, development clearing (vegetation), draining, dredging, dumping or stockpiling (native or non-native organic or inorganic materials), excavating, filling, flooding, grading, harvesting, obstructing, pile driving, or shading (with human-made structures) within critical areas and their associated buffers.
 2. The City shall not approve any permit or otherwise issue any authorization to alter the condition of any land, water, or vegetation, for development within areas of special flood hazard or to construct or alter any structure or improvement in, over, or on a critical area or associated buffer, without first ensuring compliance with the requirements of this Chapter, including, but not limited to, the following:
 - a. Building permit;
 - b. Clearing and grading permit;
 - c. Forest practices permit;
 - d. Conditional use permit;
 - e. Shoreline conditional use permit;
 - f. Shoreline substantial development permit;
 - g. Shoreline exemption;
 - h. Shoreline variance;
 - i. Short subdivision;
 - j. Subdivision;
 - k. Planned unit development;
 - l. Binding site plan;
 - m. Zoning variance;
 - n. Zoning code amendment;
 - o. Flood development permit; or
 - p. Any other adopted permit or required approval not expressly exempted by this Chapter.
 3. Approval of a permit or development proposal pursuant to the provisions of this Chapter does not discharge the obligation of the applicant to comply with the provisions of this Chapter.
 4. The City shall not grant any approval or permission to conduct a regulated activity in a critical area unless the activity is in compliance with this Chapter or unless the activity is expressly exempted by this Chapter.
 5. Many state, federal and regional regulations apply to projects conducted within critical areas. Uses and development otherwise allowed by this Chapter do not eliminate other agency regulatory requirements nor the obligation of the applicant to comply with other federal, state, and regional regulations.
- B. **Exempt Activities:** The exempt activities listed in the City's critical areas ordinance do not apply when conducted within shoreline jurisdiction as defined by city of Enumclaw shoreline master program, Chapter 15.36 EMC or if defined as "Development" within Areas of Special Flood Hazard.
- C. This Chapter is to be administered with flexibility and attention to site-specific characteristics. It is not the intent of this Chapter to make a parcel of property unusable by denying its owner reasonable

economic use of the property that would otherwise be allowed under the current code and would be consistent with other allowable uses.

- D.** It is not the intent of this Chapter to prevent the provision of public facilities and services necessary to support existing development and planned for by the community without decreasing current service levels below minimum standards (see RCW 36.70A.020(12)).
- E.** The City's enactment or enforcement of this Chapter shall not be construed for the benefit of any individual person or group of persons other than the general public.
- F.** It is not the intent of this Chapter to repeal, abrogate, or impair any existing regulations, easements, covenants, or deed restrictions. Where this chapter provides more protection to critical areas, however, the provisions of this chapter shall prevail unless specifically provided otherwise in this Chapter.

19.2.30 Exceptions.

- A.** Critical area exceptions do not apply within shoreline jurisdiction.

19.2.40 Assessment relief.

- A.** Landowners who have dedicated an easement or entered into a perpetual conservation restriction with the City to permanently control some or all regulated activities may have that portion of land exempt from special assessments such as sanitary sewers, storm sewers and water mains.

Article II. Critical Areas

19.2.50 Finding of Fact.

- A. The City finds that critical areas provide a variety of valuable and beneficial biological and physical functions that benefit the City and its residents, and/or may pose a threat to human safety or to public and private property. The beneficial functions and values provided by critical areas include, but are not limited to, water quality protection and enhancement, fish and wildlife habitat, food chain support, flood storage, conveyance and attenuation of flood waters, ground water recharge and discharge, erosion control, wave attenuation, protection from hazards, historical, archaeological, and aesthetic value protection, and recreation. These beneficial functions are not listed in order of priority.
- B. Per RCW 36.70A.030(5) Critical Areas include:
 1. Frequently Flooded Areas
 2. Geologically Hazardous Areas
 3. Critical Aquifer Recharge Areas
 4. Wetlands
 5. Fish and Wildlife Habitat Conservation Areas

19.2.60 Frequently Flooded Areas

- A. **Finding of Fact:** The City finds that frequently flooded areas provide a variety of valuable and beneficial physical functions that benefit the City and its residents, and/or may pose a threat to human safety or to public and private property. The beneficial functions and values provided by frequently flooded areas include, flood storage, conveyance and attenuation of flood waters as well as channel migration zone management.

B. Technical Information.

1. **Applicability:** This section shall apply to all areas of special flood hazards and wetlands within the jurisdiction of the City, originally adopted as Chapter 19.04 and amended as a section of Chapter 19.02.
 - a. **Basis for establishing the areas of special flood hazard.** The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled "Flood Insurance Study Rate Map dated September 29, 1989 for the City of Enumclaw" dated September, 29, 1989, with accompanying flood insurance maps, is adopted by reference and declared to be part of this chapter. The flood insurance study is on file with the city clerk, City of Enumclaw, City Hall, Enumclaw, Washington.

C. Administrator – Duties.

1. When base flood elevation data has not been provided in accordance with the area identified by the Federal Insurance Administration, Scientific and Engineering Report, referred to above, the administrator shall obtain, review and reasonably utilize any base flood elevation and floodway data available from a federal, state or other source.
2. Where base flood elevation data is provided through the flood insurance study, or as required as in subsection A of this section, obtain and record the actual (as-built) elevation (in relation to mean sea level) of the lowest floor, including basement, of all new or substantially improved structures, and whether or not the structure contains a basement;
3. For all new or substantially improved flood-proofed nonresidential structures where base flood elevation data is provided through the FIS, FIRM, or as required in EMC 19.02.060.C.1:
 - a. Obtain and record actual elevation (in relation to mean sea level) to which the structure was flood-proofed; and
 - b. Maintain the flood-proofing certifications as required in EMC 19.02.060.C.4
4. Maintain for public inspection all records pertaining to the provisions of this ordinance.
5. Interpretation of FIRM Boundaries – The administrator shall make interpretations where needed, as

to the exact location of the boundaries of the areas of special flood hazards. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in EMC 17.02.170.

6. The administrator shall notify adjacent communities and Washington State Department of Ecology prior to any alteration or relocation of a watercourse, submit evidence of such notification to federal insurance administration, and require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.
7. Habitat Assessment – The administrator shall require a habitat assessment for all development within areas of special flood hazard (reference “Floodplain Habitat Assessment and Mitigation. Regional Guidance for the Puget Sound Basin,” FEMA Region 10, 2013 or as hereafter revised).

19.2.70 Geologically Hazardous Areas

- A. Finding of Fact:** Based upon the most recent information the City has determined that only three (3) of the seven (7) Geologically Hazardous Areas listed in WAC 365-190-080 are relevant to the City. Those three categories of Geologically Hazardous Areas are:
1. Erosion Hazard Areas
 2. Landslide Hazard Areas
 3. Seismic Hazard Areas

These are the only areas that will be addressed in this Chapter.

- B. Identification.** The identification of Geologically Hazardous Areas involves the collection of baseline data and the preparation of a Critical Areas Report (see Appendix B and Appendix E) by a Qualified Professional. In the case of geologic hazards the Qualified Professional is a Registered Engineering Geologist or a licensed Geotechnical Engineer. The following is a list of technical information requirements:
1. **Erosion Hazard Areas – Technical Information:** Erosion hazard: areas identified as having high or very high water erosion hazard by the U.S. Department of Agricultural Soil Conservation Service as supplied by the SCS area office;
 2. **Landslide Hazard Areas – Technical Information:** Landslide hazard: areas potentially subject to landslides based upon the following combination of geologic, topographic and hydrologic factors:
 - a. Areas of historic failure including:
 - (1) Those areas delineated by the U.S. Department of Agriculture, Soil Conservation Service, as having “severe” limitations for building site development,
 - (2) Those areas mapped as quaternary slumps, earthflows, mudflows, lahars, or landslides on maps published by the U.S. Geological Survey or Department of Natural Resource Division of Geology and Earth Resources,
 - b. Areas with all three of the following characteristics:
 - (1) Slopes of 15 percent gradient or greater, and
 - (2) Hillsides intersecting geologic contacts with a relatively permeable sediment overlaying a relatively impermeable sediment or bedrock, and
 - (3) Springs or ground water seepage,
 - c. Areas that have shown movement during the Holocene Epoch or which are underlain or covered by mass wastage debris of the epoch,
 - d. Slopes that are parallel or sub-parallel to planes or weakness in subsurface materials,
 - e. Privately owned areas with slopes that have gradients greater than 80 percent subject to rock fall during seismic shaking,
 - f. Technical Information.
 - (1) Identify and quantify geologic, topographic and hydrologic factors that might contribute to slope instability. The rate and extent of potential hazards to development activity must be assessed and mitigation measures, if any, evaluated. The proposed development must be

analyzed in light of the hazards and effects represented by the landslide exposure on proposed private and public investments. Development operational factors should be included in the analysis to account for the effects of residential landscape irrigation, storm water generation from impervious surfaces and the influence of street conveyance on slope stability.

(2) The submittal of a geotechnical report establishing the suitability of the site for construction shall be required.

(3) If found to be suitable, a professional registered engineer shall design a foundation that accommodates on-site conditions.

3. Seismic Hazard Areas – Technical Information.

a. Identify and quantify geologic factors that might contribute to seismic activity. The rate and extent of potential hazards to development activity must be assessed and mitigation measures, if any, evaluated.

b. The proposed development must be analyzed in light of the hazards and effects represented by the seismic exposure on proposed private and public investments.

19.2.80 Critical Aquifer Recharge Areas

A. Finding of Fact: No Category I Critical Aquifer Recharge Areas have been identified or designated within the City Limit of, or within the Urban Growth Area around, the City of Enumclaw (12/2004).

B. Critical Aquifer Recharge Areas - Categories. Critical aquifer recharge areas are categorized as follows:

1. Category I Critical Aquifer Recharge Areas include those mapped areas that Enumclaw has determined are highly susceptible to groundwater contamination and that are located within a sole source aquifer or a wellhead protection area;

2. Category II Critical Aquifer Recharge Areas include those mapped areas that Enumclaw has determined:

a. have a medium susceptibility to ground water contamination and are located in a sole source aquifer or a wellhead protection area; or

b. are highly susceptible to groundwater contamination and are not located in a sole source aquifer or wellhead protection area; and

3. Category III Critical Aquifer Recharge Areas include those mapped areas that Enumclaw has determined have low susceptibility to groundwater contamination.

4. Technical Information Requirements: Delineation of the recharge areas on a scaled development plan and detailed information on the following items:

a. Hydro-geological susceptibility to contamination and contamination loading potential;

b. Depth to ground water;

c. Hydraulic conductivity and gradient;

d. Soil permeability and contamination attenuation;

e. A vadose zone analysis including permeability and attenuation properties;

f. An analysis of the recharge area's toleration for impervious surfaces in terms of both aquifer recharge and the effect on water quality degradation;

g. A summary of the proposed development's effect on the recharge area concentrating on items "d" and "f";

h. Existing aquifer water quality analysis.

19.2.90 Wetlands – Category and Buffer Widths

A. Wetlands are described by wetland class, wetland category in Appendix A.

B. Identification of wetlands and delineation of their boundaries shall be done in accordance with the approved federal wetland delineation manual and applicable regional supplements.

C. Buffer Requirements. The standard buffer widths in Table 2A have been established in accordance with the best available science. They are based on the category of wetland and the habitat score as determined by a qualified wetland professional using the *Washington State Wetland Rating System for Western*

EMC 19.02 - Critical Areas Ordinance - City of Enumclaw

Washington: 2014 Update (Ecology Publication #14-06-029, or as revised and approved by Ecology).

1. The use of the standard buffer widths requires the implementation of the measures in Table 2B, in addition to a relatively undisturbed, protected vegetated corridor at least 100-foot wide between the wetland and any other Priority Habitats as defined by the Washington Department of Fish and Wildlife, where applicable, to minimize the impacts of the adjacent land uses. The corridor must be protected for the entire distance between the wetland and the Priority Habitat by some type of legal protection such as a conservation easement.
2. If an applicant chooses not to apply the mitigation measures in Table 2B, then a 33% increase in the width of all buffers is required. For example, a 75-foot buffer with the mitigation measures would be a 100-foot buffer without them.
3. The standard buffer widths assume that the buffer is vegetated with a native plant community appropriate for the ecoregion. If the existing buffer is unvegetated, sparsely vegetated, or vegetated with invasive species that do not perform needed functions, the buffer should either be planted to create the appropriate plant community or the buffer should be widened to ensure that adequate functions of the buffer are provided.

Table 2A Wetland Buffer Requirements						
Category	<i>With minimization measures</i>			<i>Without minimization measures</i>		
	Habitat Score			Habitat Score		
	3-5	6-7	8-9	3-5	6-7	8-9
I: Based on Total Score	75	110	225	100	150	300
I: Bogs & Wetlands of High Conservation Value	190	190	225	250	250	300
I: Forested	75	110	225	100	150	300
II	75	110	225	100	150	300
III	60	110	225	80	150	300
IV	40			50		

Table 2B Required measures to minimize impacts to wetlands
(Measures are required, where applicable to a specific proposal)

Disturbance	Required Measures to Minimize Impacts
Lights	<ul style="list-style-type: none"> • Direct lights away from wetland
Noise	<ul style="list-style-type: none"> • Locate activity that generates noise away from wetland • If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source • For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining, establish an additional 10' heavily vegetated buffer strip immediately adjacent to the outer wetland buffer

Toxic runoff	<ul style="list-style-type: none"> • Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered • Establish covenants limiting use of pesticides within 150 ft of wetland • Apply integrated pest management
Stormwater runoff	<ul style="list-style-type: none"> • Retrofit stormwater detention and treatment for roads and existing adjacent development • Prevent channelized flow from lawns that directly enters the buffer • Use Low Intensity Development techniques (per PSAT publication on LID techniques)
Change in water regime	<ul style="list-style-type: none"> • Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns
Pets and human disturbance	<ul style="list-style-type: none"> • Use privacy fencing OR plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion • Place wetland and its buffer in a separate tract or protect with a conservation easement
Dust	<ul style="list-style-type: none"> • Use best management practices to control dust
Disruption of corridors or connections	<ul style="list-style-type: none"> • Maintain connections to offsite areas that are undisturbed • Restore corridors or connections to offsite habitats by replanting

D. Increased Wetland Buffer Area Width. Buffer widths shall be increased on a case-by-case basis as determined by the Administrator when a larger buffer is necessary to protect wetland functions and values. This determination shall be supported by appropriate documentation showing that it is reasonably related to protection of the functions and values of the wetland. The documentation must include but not be limited to the following criteria:

1. The wetland is used by a plant or animal species listed by the federal government or the state as endangered, threatened, candidate, sensitive, monitored or documented priority species or habitats, or essential or outstanding habitat for those species or has unusual nesting or resting sites such as heron rookeries or raptor nesting trees; or
2. The adjacent land is susceptible to severe erosion, and erosion-control measures will not effectively prevent adverse wetland impacts; or
3. The adjacent land has minimal vegetative cover or slopes greater than 30 percent.

E. Buffer averaging to improve wetland protection may be permitted when all of the following conditions are met:

1. The wetland has significant differences in characteristics that affect its habitat functions, such as a wetland with a forested component adjacent to a degraded emergent component or a “dual-rated” wetland with a Category I area adjacent to a lower-rated area.
2. The buffer is increased adjacent to the higher-functioning area of habitat or more-sensitive portion of the wetland and decreased adjacent to the lower-functioning or less-sensitive portion as demonstrated by a critical areas report from a qualified wetland professional.
3. The total area of the buffer after averaging is equal to the area required without averaging.
4. The buffer at its narrowest point is never less than either ¾ of the required width or 75 feet for Category I and II, 50 feet for Category III, and 25 feet for Category IV, whichever is greater.

F. Averaging to allow reasonable use of a parcel may be permitted when all of the following are met:

1. There are no feasible alternatives to the site design that could be accomplished without buffer averaging.
 2. The averaged buffer will not result in degradation of the wetland's functions and values as demonstrated by a critical areas report from a qualified wetland professional.
 3. The total buffer area after averaging is equal to the area required without averaging.
 4. The buffer at its narrowest point is never less than either $\frac{3}{4}$ of the required width or 75 feet for Category I and II, 50 feet for Category III and 25 feet for Category IV, whichever is greater.
- G.** Measurement of Wetland Buffers. All buffers shall be measured perpendicular from the wetland boundary as surveyed in the field. The buffer for a wetland created, restored, or enhanced as compensation for approved wetland alterations shall be the same as the buffer required for the category of the created, restored, or enhanced wetland. Only fully vegetated buffers will be considered. Lawns, walkways, driveways, and other mowed or paved areas will not be considered buffers or included in buffer area calculations.
- H.** Buffers on Mitigation Sites. All mitigation sites shall have buffers consistent with the buffer requirements of this Chapter. Buffers shall be based on the expected or target category of the proposed wetland mitigation site.
- I.** Buffer Maintenance. Except as otherwise specified or allowed in accordance with this Chapter, wetland buffers shall be retained in an undisturbed or enhanced condition. In the case of compensatory mitigation sites, removal of invasive non-native weeds is required for the duration of the mitigation bond (EMC 19.02 Appendix C).
- J.** Impacts to Buffers. Requirements for the compensation for impacts to buffers are below.
- K.** Overlapping Critical Area Buffers. If buffers for two contiguous critical areas overlap (such as buffers for a stream and a wetland), the wider buffer applies.
- L.** Allowed Buffer Uses. The following uses may be allowed within a wetland buffer in accordance with the review procedures of this Chapter, provided they are not prohibited by any other applicable law and they are conducted in a manner so as to minimize impacts to the buffer and adjacent wetland:
1. Conservation and Restoration Activities. Conservation or restoration activities aimed at protecting the soil, water, vegetation, or wildlife.
 2. Passive recreation. Passive recreation facilities designed and in accordance with an approved critical area report, including:
 - a. Walkways and trails, provided that those pathways are limited to minor crossings having no adverse impact on water quality. They should be generally parallel to the perimeter of the wetland, located only in the outer twenty-five percent (25%) of the wetland buffer area, and located to avoid removal of significant trees. They should be limited to pervious surfaces no more than five (5) feet in width for pedestrian use only. Raised boardwalks utilizing non-treated pilings may be acceptable.
 - b. Wildlife-viewing structures.
 3. Educational and scientific research activities.
 4. Normal and routine maintenance and repair of any existing public or private facilities within an existing right-of-way, provided that the maintenance or repair does not increase the footprint or use of the facility or right-of-way.
 5. The harvesting of wild crops in a manner that is not injurious to natural reproduction of such crops and provided the harvesting does not require tilling of soil, planting of crops, chemical applications, or alteration of the wetland by changing existing topography, water conditions, or water sources.
 6. Drilling for utilities/utility corridors under a buffer, with entrance/exit portals located completely outside of the wetland buffer boundary, provided that the drilling does not interrupt the ground water connection to the wetland or percolation of surface water down through the soil column. Specific studies by a hydrologist are necessary to determine whether the ground water connection to the wetland or percolation of surface water down through the soil column is disturbed.
 7. Enhancement of a wetland buffer through the removal of non-native invasive plant species. Removal of invasive plant species shall be restricted to hand removal. All removed plant material shall be taken away from the site and appropriately disposed of. Plants that appear on the Washington State Noxious Weed Control Board list of noxious weeds must be handled and disposed of according to a noxious weed control plan appropriate to that species. Revegetation with appropriate native species at natural densities is allowed in conjunction with removal of invasive plant species.

8. Stormwater management facilities. Stormwater management facilities are limited to stormwater dispersion outfalls and bioswales. They may be allowed within the outer twenty-five percent (25%) of the buffer of Category III or IV wetlands only, provided that:
 - a. No other location is feasible; and
 - b. The location of such facilities will not degrade the functions or values of the wetland; and
 - c. Stormwater management facilities are not allowed in buffers of Category I or II wetlands.
9. Non-Conforming Uses. Repair and maintenance of non-conforming uses or structures, where legally established within the buffer, provided they do not increase the degree of nonconformity.

19.2.100 Fish and Wildlife Conservation Areas – Habitat Types and Buffer Widths

- A. Finding of Fact:** There are 8 types of habitat listed in WAC 365-190-080(5) to be designated as fish and wildlife habitat conservation areas. In addition, there are 6 considerations to be factored into the designation process. Within the City of Enumclaw and its urban growth areas there are only two types of habitat present that will be classified or designated as fish and wildlife habitat conservation areas. The two types are stream habitat and buffers (riparian areas) adjacent to regulated streams or water bodies.

The latter will be important in the overall effort to restore and enhance salmonid habitat as well as for creating open space corridors adjacent to the two major watercourses in, or in close proximity to, the City. Those two watercourses, Boise Creek and Newaukum Creek, and their associated buffers will be candidate areas for critical area mitigation opportunities that are consistent with goals and objectives defined in the City's Comprehensive Plan and in the watershed restoration and management plans being developed in Water Resource Inventory Area (WRIA) 9, which is the Green River watershed and in WRIA 10, which is the White River watershed.

- B. Technical Information.** The following is a list of technical information to be included in a Critical Areas Report (see Appendix E) prepared by a Qualified Professional for submit to the City as part of a Critical Areas Permit:
1. Using standard field data collection methods a Qualified Professional will identify and delineate stream and riparian habitats located within and immediately adjacent to a proposed project site.
 2. Habitat areas suited for any life stage of any endangered, threatened, and sensitive species or priority habitats defined by the Washington State Department of Fish and Wildlife shall be identified, delineated, and reported to the City.
 3. The investigation shall include relative density and species richness, breeding, habitat, seasonal range dynamics and movement corridors.
 4. The analysis shall address the relative tolerance by species of human activities.
 5. The development proposal shall be evaluated in terms of its influence on the above wildlife factors.
 6. The location of fish-bearing streams, corresponding buffers, and the high water mark shall be identified on a site plan that shall be included in the Critical Areas Report.
 7. The Administrator will review the technical information presented in the Critical Areas Report. Based upon the description of potential development related impacts and the discussion of potential risk of impacts to fish and wildlife species as well as their respective habitats the Administrator will recommend the need for preparation of a mitigation plan.
 8. The Administrator shall require the Applicant to submit a Final Critical Areas Report identifying Fish and Wildlife Habitat Conservation Areas (or the lack thereof) and including a mitigation plan as necessary prior to approval of any development related permits, including a Critical Areas Permit.

- C. Streams and Watercourses:** Streams and watercourses are classified primarily on the basis of salmonid fish use. Formerly these habitat features were classified using the Washington State Department of Natural Resources (DNR) water typing system (WAC 222-16-030), a system designed to regulate forest practices in areas adjacent to wetlands, watercourses, and water bodies. The list

below shows the original water type and the revised water type:

1. **Type 1 Water**, which has been changed to **Type S** for all waters inventoried as “shorelines of the state” under the Enumclaw Shoreline Master Program;
2. **Type 2 Water**, which has been changed to **Type F** for fish bearing streams with perennial flow;
3. **Type 3 Water**, which has been changed to **Type F**; for fish bearing streams with intermittent flow;
4. **Type 4 Water**, which has been changed to **Type Np** for streams with perennial or intermittent flow, but without direct fish use;
5. **Type 5 Water**, which has been changed to **Type Ns** for intermittent and ephemeral streams or watercourses that are not used by fish, but have enough flow energy to scour a stream channel to mineral soil;
6. **Type 5 Water**, which has been changed to **Type O** for watercourses that do not have enough flow energy to scour a stream channel to mineral soil or bedrock and that do not have fish use. This latter type is sometimes referred to as a swale or drainage swale.

A buffer, consisting of natural vegetation, shall be required along all streams as classified by the DNR water typing classification system (WAC 222-16-030). The native growth buffer shall be established on both sides of the stream or watercourse and shall extend landward from the ordinary high water of the water body. The following buffer widths are the standard buffer width requirements:

DNR Water Type S	100-foot buffer
DNR Water Type F	75-foot buffer
DNR Water Type Np	50-foot buffer
DNR Water Type Ns	25-foot buffer

Water Type O is not a DNR classification, but has been adopted into this Chapter to provide regulatory guidance for vegetated swales. The City will not impose a buffer requirement on Water Type O unless the Administrator is convinced, on the basis of available field data and personal knowledge, that a buffer is needed to protect downstream critical areas from a risk of significant adverse impact due to onsite water quality degradation.

- D. Buffer Width Averaging, Reduction, and Enlargement:** If approved by the Administrator, buffer width averaging, buffer width reduction, and buffer width enlargement will be consistent with the provisions specified in Section 19.02.090 above.

19.2.110 Resource Lands

- A. Mineral resource lands may only be developed in accordance with Chapter 19.28 EMC.

19.2.120 Critical Areas Maps and Data Bases

- A. The City shall maintain inventory maps showing the general locations of critical areas as well as a data base with supporting information. Each critical area will have its own individual map or overlay. These maps shall be available for use by public and private entities.
- B. There are maps in the current comprehensive plan that show the approximate location and extent of critical areas in the City. These maps are not intended to be used for site engineering or planning and are not a substitute for Critical Areas Identification and Delineations process required in other sections of this Chapter. Additional critical areas are presumed to exist, and are protected under all the provisions of this chapter. In the event that any of the critical area designation shown on the map conflicts with the criteria set forth in this chapter, the criteria shall control.

Article III. Critical Area Reviews

19.2.130 General Requirements.

- A. No regulated activity shall occur within a critical area or its associated buffer, without review by the Administrator and approval of a shoreline exemption, shoreline substantial development permit, shoreline conditional use permit, or shoreline variance permit.

19.2.140 Submittal Requirements.

- A. **Who must apply:** Any individual, company, agency, or other entity proposing to undertake a regulated activity in the City must apply for a shoreline substantial development permit or shoreline exemption (per EMC Title 15) prior to initiating any site altering activity. Some uses and development proposals may also require a shoreline conditional use permit or shoreline variance permit.
- B. **Information Requirements.** Unless the city waives one or more of the following information requirements, application for a shoreline permit or exemption on a property containing critical areas under this Chapter includes, but is not limited to, the following information:
 - 1. Name and contact information for the project proponent or Applicant;
 - 2. Address and/or legal description of the proposed project site;
 - 3. A description of the site, including the size of the proposed site;
 - 4. A description of adjacent properties, including a description of the current use(s) on those properties, a description of the vegetation and vegetation conditions on those properties, the name(s) and contact information for all adjacent property owners, and a listing of any easements that will be needed on adjacent properties or that exist on the proposed project site that grant use to entities other than the project site owner(s);
 - 5. A description of the proposed project activity;
 - 6. A Critical Areas Report that documents the ecological, aesthetic, economic, or other values of the critical areas, including a discussion of the methodology used to identify, delineate, and survey critical areas described in the report (refer to Appendix B for minimum report content requirements);
 - 7. Site plan(s) or site map(s) at a scale no smaller than one inch equals 40 feet showing the entire parcel of land owned (or a under contract to purchase) by the applicant. In addition the site plan or site map must show:
 - a. all critical area boundaries and their associated buffers identified and delineated within and in close proximity to the proposed project;
 - b. existing and proposed site topography and drainage features (i.e. ditches, streams, culverts, pipelines, etc.);
 - c. all significant trees, which includes all conifers with a 6-inch dbh or greater and all deciduous species with an 8-inch or greater dbh;
 - d. all existing structures, utilities, roadways, and other site improvements; and
 - e. the proposed stormwater management plan;
 - 8. A description of site development alternatives and an evaluation of those alternatives vis-à-vis any proposed critical area alterations. Include a rationale for not avoiding or minimizing impacts to critical areas identified within the project site;
 - 9. A mitigation plan may be submitted to the Administrator at the time the Applicant submits an application or the Administrator may allow the Applicant to defer submittal of the mitigation until after the preliminary project design has been reviewed by the Administrator. The Applicant will be required, however, to submit a Final Mitigation Plan (see Appendix C for Mitigation Plan Requirements) describing mitigation projects for all unavoidable critical area impacts before any project permits are approved by the Administrator. The Final Mitigation Plan shall include baseline information, environmental goals and objectives, a Financial Guarantee quantity worksheet to “bond” the proposed mitigation activities, detailed construction plans, performance standards, a 3 to 5 year monitoring program, and a contingency plan.
- C. **Preparation of a Critical Area Report:** A Critical Area Report (see Appendix and Appendix D) must be prepared by a Qualified Professional (Critical Areas consultant), with expertise in the critical

area of concern, as defined in this Chapter.

1. The Critical Areas Consultant will be retained by the Applicant to complete any of the following activities: critical area site analysis and evaluation, site restoration and/or enhancement, and site development plan or project design. The consultant will be selected from a list of Qualified Professionals (as defined in WAC 365-195-905(4) and Appendix D) that shall be maintained by and on file with the Administrator.
2. The Applicant may use the professional services of any Qualified Professional to assist with Critical Areas assessment and reporting whether they are or are not listed on the City maintained list. The Administrator may request a qualification statement from any Consultant providing professional services to an Applicant, particularly when Critical Areas assessments and reporting is part of a proposed land use action or development plan.

D. Critical Area Boundary. Critical area boundary shall be determined by the Applicant through the performance of a field investigation.

1. The Administrator, when requested by the Applicant, may waive the delineation of the boundary requirement for the Applicant and, in lieu of delineation by the Applicant, perform the delineation.
 - a. All wetland delineations will be completed in accordance with the approved wetland delineation manual and applicable regional supplements.
2. The Administrator shall consult with qualified critical areas consultant and technical experts or other experts as needed to perform the delineation.
3. The applicant may be charged for the costs incurred in accordance with the provisions of this section.
4. Where the Administrator delineates a wetland at the request of the applicant, such delineation shall be considered a final determination.
5. Where the applicant delineates the critical area boundary, the administrator shall verify the accuracy of, and may adjust, the boundary. If the applicant contests the adjusted boundary, the administrator shall, at the applicant's expense, obtain expert services to render a final delineation.

E. Best Available Science: A Critical Area Report shall use scientifically valid methods and studies in the analysis of critical area data and field reconnaissance and reference the source of science used. The critical area report shall evaluate the proposal and all probable impacts to critical areas in accordance with the provisions of this Chapter. Recommendations for buffer width averaging, buffer width reduction, and buffer impact mitigation actions must be based in Best Available Science, which includes local expertise and site specific knowledge.

F. Additional Studies. When an Applicant submits an application for a critical area permit the application shall indicate whether any environmentally critical area is located on the site. If the Administrator determines that sufficient environmental information to evaluate a proposal is not available, the Administrator shall notify the Applicant that special environmental studies are required.

1. Special environmental studies may include a comprehensive site inventory and analysis, a wetland study, a geotechnical study, a discussion of potential impacts from the proposed development, and specific measures designed to mitigate any potential on- or off-site adverse environmental impacts of the applicant's proposal.
2. The Administrator shall develop and maintain a detailed list of required study contents.
3. All special studies shall be completed by a firm or individual selected, in concert between the City and the Applicant, from a list Qualified Professional Critical Area Consultants that is maintained by and available from the Administrator.

19.2.150 Critical Area Review

A. As part of the review process, the City shall:

1. Verify the information submitted by the applicant;
2. Evaluate the available current City Critical Areas maps and data files to determine if there are identified critical areas within or in close proximity to the proposed project site. The

Administrator may require the Applicant to submit a Critical Area Reconnaissance Report (CARR) Form (see Appendix B) to assist in the determination regarding the presence of identified and regulated critical areas. The CARR form must be prepared by a Qualified Professional.

3. Determine whether the proposed project is likely to impact the functions or values of critical areas; and
 4. Determine if the proposed project adequately addresses the impacts and avoids impacts to the critical area associated with the project.
- B.** If the proposed project is within, adjacent to, or is likely to impact a critical area, the City shall:
1. Require the Applicant to complete a field study of the project site and immediate surrounding area to the Administrator. The Applicant shall be required, at a minimum, to submit a Critical Areas Report (see Appendix B) to the Administrator. The Critical Areas Report must be prepared by a Qualified Professional;
 2. Review and evaluate the Critical Area Report;
 3. Determine whether the development proposal conforms to the purposes and performance standards of this Chapter, including the criteria in Section 19.02.160.A. and Section 19.02.160.B.

19.2.160 Financial Guarantees

A. Financial Guarantees: At the time of a shoreline permit or exemption approval the Applicant will be required to post a financial guarantee for all critical area alteration mitigation activities. The financial guarantee shall be paid prior to initiating any activities in a critical area. The financial guarantee amount will vary by project and may be determined by:

1. The Applicant securing three (3) bonafide bids from experienced landscaping contractors or qualified critical area restoration contractors to install, maintain, and monitor a mitigation plan that has been approved by the Administrator. The highest bid will determine the bond amount. The Administrator can, at the Applicant's expense, solicit an independent bid for installation, maintenance, and monitoring of the approved plan if the Administrator believes the Applicant's submittal is significantly lower than expected.
2. The Administrator can prepare, or have prepared, a standard bond quantity worksheet to determine the bond quantity.
3. The Applicant depositing a cash deposit in a joint City/Applicant interest bearing account at a local financial institution.
 - a. Interest accrued while the cash deposit is held in deposit at the financial institution will be deposited in the Applicant's interest account.
 - b. No funds will be dispersed from the cash account or the interest account unless the Applicant fails to implement the approved mitigation plan within a reasonable time period (12 months) following approval of the mitigation plan and site plans and the initiation of construction.
 - c. If the Applicant fails to perform as directed in the approved mitigation plan both the interest and cash accounts will be forfeited by the Applicant to the Administrator.
4. Financial guarantees posted for mitigation projects will be posted in two parts, a construction guarantee and a maintenance/monitoring guarantee. After the Applicant has implemented the construction and planting phases of the mitigation project and the mitigation effort is approved by the Administrator the construction portion of the Financial Guarantee will be released to the Applicant. Following the end of the 5-year maintenance and monitoring period and a review by the Administrator indicating the project has been approved the Maintenance and Monitoring Financial Guarantee will be released to the Applicant.

Article IV. Development Standards for Critical Areas

19.2.170 Critical Area Development Standards.

- A. Area of Special Flood Hazard – Development Standards.** In all areas of special flood hazard, the following standards are required:
1. Anchoring.

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- a. All new construction and substantial improvement shall be anchored to prevent flotation, collapse or lateral movement of structure.
- b. All manufactured homes must likewise be anchored to prevent flotation, collapse or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, the use of over the top or frame ties to ground anchor (reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques).
2. Construction Materials and Methods.
 - a. All new construction and substantial improvement shall be constructed with materials and utility equipment resistant to flood damage.
 - b. All new construction and substantial improvement shall be constructed using methods and practices that minimize flood damage.
 - c. Electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during the condition of flooding.
3. Utilities.
 - a. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.
 - b. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the system into floodwaters.
 - c. On-site waste disposal systems shall be located to avoid impairment or contamination of systems or from systems during flooding.
4. Subdivision proposals – Area of Special Flood Hazard.
 - a. All subdivision proposals shall be consistent with the need to minimize flood damage.
 - b. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.
 - c. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.
 - d. Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated for subdivision proposals and other proposed developments which contain at least 50 lots or five acres (whichever is less).
5. Review of building permits – Area of Special Flood Hazard. Where elevation data is not available either through the flood insurance study or from other authoritative source, applications for building permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment by the Administrator and includes the use of historical data, high water marks, photographs of past floods, etc., where available to determine flood level. Failure to elevate at least two feet above the highest adjacent grade in these zones may result in higher insurance rates.
6. Residential construction – Area of Special Flood Hazard.
 - a. New construction or substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to or above base flood elevation.
 - b. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for entry and exit of floodwaters. Design for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:
 - (1) A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
 - (2). The bottom of all openings shall be no higher than one foot above grade.
 - (3). Openings shall be equipped with screens, louvers or other coverings or devices; provided, that they permit the automatic entry and exit of floodwaters.
7. Nonresidential construction – Flood Hazard Areas. New construction or substantial improvement of any commercial, industrial or other nonresidential structure shall either have the highest floor, including basement, elevated to or above the level of the base flood elevation; or, together with attendant utility and sanitary facilities, shall:

- a. Be flood-proofed so that below one foot above the base flood level the structure is watertight with walls substantially impermeable to the passage of water;
 - b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of the buoyancy;
 - c. Be certified by a registered professional engineer or architect that the design methods of construction are in accordance with accepted standard of practice for meeting provisions of this subsection based upon their development and/or review of the structural design, specifications and plans. Such certification shall be provided to the official as set forth above;
 - d. Nonresidential structures that are elevated, not flood-proofed, must meet the same standards for space below the lowest floor as described in subsection B of this section;
 - e. Applicants flood-proofing nonresidential buildings shall be notified that flood insurance premiums will be based upon rates that are one foot below flood-proofed level (e.g., a building flood-proofed to one foot above the base flood level will be rated as at the base flood level).
- 8. Manufactured homes – Area of Special Flood Hazard.** All manufactured homes to be placed or substantially improved within zones A1-30, AH and AE on the community’s FIRM shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is to or above the base flood elevation; and be securely anchored to an adequately anchored foundation system in accordance with the provisions set forth in EMC 19.04.090(A).
- 9. Recreational Vehicles– Area of Special Flood Hazard.** Recreational vehicles are allowed to be stored on sites within special flood hazard areas if they are fully licensed and ready for highway use, on their wheels, not connected to utilities and meet other zoning requirements.
- 10. Floodways – Area of Special Flood Hazard.** Floodways area areas as designated in the section involving basis for establishing areas of special flood hazards set forth above, Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles, and erosion potential, the following provisions apply:
- a. Prohibit encroachments, including fill, new construction, substantial improvement and other development unless certification by registered professional engineer or architect is provided demonstrating that the encroachment shall not result in increased flood levels during the occurrence of the base flood discharge.
 - b. Construction or reconstruction of residential structures is prohibited within designated floodways, except for:
 - (1) Repairs, construction or improvements to a structure which do not increase the ground floor area; and
 - (2) Repairs, reconstruction or improvements to a structure, the cost of which does not exceed 50 percent of the market value of the structure either:
 - (a) before the repair, reconstruction or improvement has started; or
 - (b) if the structure has been damaged, and is being restored, before damage occurred.
 - (3) Any improvement of a structure to correct existing violations of state or local health, sanitary or safety code specifications which are the minimum necessary to assure safe living conditions as determined by the Administrator, or to structures identified as historical places shall not be included in the 50 percent.
 - c. If subsection A of this section is satisfied, all new construction and substantial improvement shall comply with the applicable flood hazard reduction provisions as set forth in the provisions for flood hazard reduction.
 - d. The city will control the degree of alteration of natural floodplains, wetlands, stream channels and natural protective barriers to help accommodate the storage or channeling of floodwaters, through provisions in the adopted stormwater design manual regulations.

B. Geologically Hazardous Areas.

1. Erosion Hazard Areas – Development Standards.

- a. Erosion hazard areas shall be avoided as locations for building construction, roads or utility systems, where mitigation is not feasible.
- b. Development activities or their support infrastructure shall not be allowed that would directly or indirectly worsen the erosion hazard identified in the site analysis.

- c. Land clearing, grading, and filling shall not be permitted between October 15th and April 1st.

2. Landslide Hazard Areas - Development Standards

- a. Documented landslide hazard areas shall be avoided as locations for building construction, roads or utility systems where mitigation is not feasible.
- b. If the degree of hazard warrants some development activity, post-construction slope stabilization and appropriately upgraded road construction specifications shall be employed to eliminate as completely as practicable any public or private exposure to landslide hazards or abnormal maintenance or repair costs.
- c. Land clearing, grading, and filling shall not be permitted between October 15th and April 1st.

3. Seismic Hazard Areas – Development Standards.

- a. The list below defines critical facilities that will require engineering and design elements suitable for protecting public health and safety as well as other critical areas when sited in a seismic hazard area:
 - (1) Hospitals and other medical facilities having surgery and emergency treatment areas;
 - (2) Structures housing, supporting or containing sufficient quantities of toxic or explosive substances to be dangerous to the safety of the general public if released;
 - (3) Covered structures whose primary occupancy is public assembly, with capacity of greater than 300 persons;
 - (4) Buildings for schools through secondary or day care centers, with a capacity of greater than 250 students;
 - (5) Buildings for colleges or adult education schools, with a capacity of 500 students or greater;
 - (6) Medical facilities with 50 or more resident incapacitated patients;
 - (7) Jails and detention facilities; and
 - (8) All structures with occupancy of greater than 5,000 people.

C. Critical Aquifer Recharge Areas – Development Standards.

1. The site analysis will create a water quality baseline which will serve as a minimum standard that shall not be further degraded by proposed development.
2. The creation of additional impervious surfaces shall be limited to that amount described in the site analysis that will ensure adequate aquifer recharge and water quality protection.
3. Permits shall ensure that all best management practices are employed to avoid introducing pollutants into the aquifer. This includes the complete collection and disposal of storm water outside of the aquifer recharge area for all development impervious surfaces.

D. Wetlands – Development Standards

1. Development Standards for wetland habitat and wetland buffers are defined in Section 19.02.090, Section and Sections 19.02.130 through 19.02.180.
2. The Applicant will not initiate any habitat altering activities within a regulated wetland adjacent to a stream or river prior to having obtained approval for the proposed mitigation plan and a valid Hydraulic Project Approval (HPA) from the Washington Department of Fish and Wildlife.
3. The Applicant will not initiate any work in an area that has been or has the potential to be designated as a Wetland or Fish and Wildlife Habitat Conservation Area without obtaining either a valid Section 404 Permit or a letter indicating the affected wetland is isolated issued by the US Army Corps of Engineers, Regulatory Branch.

E. Fish and Wildlife Habitat Conservation Areas – Development Standards.

1. No permit for land use activities involving the alteration of identified Fish and Wildlife Habitat Conservation Areas shall be granted by the Administrator unless mitigation of adverse effects that will ensure continuation of baseline populations for all endangered, threatened and sensitive species can be provided.
2. Development will not be allowed in Fish and Wildlife Habitat Conservation Areas without Administrator approval if listed species (those species listed on the Federal Endangered Species list and the State of Washington Priority Habitat and Species list) and their critical habitats will

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suffer population declines, migration route interruption, or habitat degradation , the Administrator may approve development in Fish and Wildlife Conservation Areas if it can be demonstrated that:

- a. mitigation measures (Best Management Practices) intended to minimize or eliminate adverse affects on species and habitat are incorporated in the development plans; and
 - b. the Applicant provides valid and scientifically supportable information demonstrating that adequate regional populations will be maintained after the development activities have ceased and the site is occupied.
3. Development reviews shall include regional species occurrence and movements and will avoid creating isolated subpopulations where warranted.
 4. A grading, restoration, and erosion control plan shall be approved by the City prior to initiating any work proposed adjacent to a fish-bearing stream or buffer.
 5. Any disturbance in the buffer area shall be restored and rehabilitated to ensure erosion and water quality is not degraded from predevelopment conditions.
 6. Any disturbance in the buffer area shall be restored and rehabilitated to ensure restoration of native vegetation (trees, shrubs, and groundcover) within the Fish and Wildlife Habitat Conservation Area.
 7. The applicant will not initiate any work in a stream (below the Ordinary High Water Mark) without having a valid Hydraulic Project Approval (HPA) issued by the Washington Department of Fish and Wildlife and, if necessary, a valid Section 404 Permit issued by the US Army Corps of Engineers, Regulatory Branch.
 8. In the event that a Federal or state protected species or its associated habitat de-listed or the Federal and state policies regarding listed species and habitats are modified or removed the Administrator will decide how fish and wildlife conservation areas will be managed from a permitting perspective.

19.20.180 Critical Areas Management Incentives

A. Limited density transfer.

1. For development proposals on lands containing Category II, III or IV wetlands and any category of wetland buffers, the administrator shall determine allowable dwelling units for residential development proposals based on the formulas below.
2. The following formula for density calculations is designed to provide incentives for the preservation of wetlands and wetland buffers, flexibility in design, and consistent treatment of different types of development proposals. The formula shall apply to all properties within existing residential zones on which wetlands and wetland buffers are located.
3. The maximum number of dwelling units (DU) for a lot or parcel which contains wetlands and wetland buffers shall be equal to:

$$(Acres\ in\ Wetland\ or\ Buffer) \times (DU/Acre) \times (Density\ Credit)$$

4. The density credit figure is derived from the following table:

Percentage of Site in Buffer	Density Credit
100%	100%
90%	90%
80%	80%
70%	70%
60%	60%
50%	50%
40%	40%
30%	30%
20%	20%
10%	10%

5. The density credit can only be transferred within the development proposal site. To the extent that application of the formula may result in lot sizes less than the minimum allowed by the underlying district, they are hereby authorized; provided, that the resultant lot is no less than 50 percent of the required size. In no event shall a reduction in lot size result in lot sizes less than 7,200 square feet or result in a change in use from that allowed in the underlying zone district. Deductions of up to 50 percent for setbacks and width at building are also authorized as long as the lots standards do not conflict with the family of International Building Code requirements.
 6. The administrator shall require and approve a binding site plan, submitted by the applicant indicating lot sizes, lot configurations, building envelopes, and elevations, and structure profiles as a condition of allowing any reduction on the standards of the underlying zone. Any density credit (for wetlands only) resulting in reduction of standards for the underlying zone district shall also require a variance from the board of adjustment.
- B. Non-monetary Compensation for Voluntary Increases in Critical Habitat Set-asides:** This is a program by which the City would provide non-monetary compensation for Applicants or Landowner cooperation in establishing larger than the minimum required buffers adjacent to designated critical areas or riparian areas adjacent to aquatic habitats such as streams, ponds, or lakes.
1. An example of this program would be the Administrator compensating a land owner (whose active agricultural operation initiated prior to the adoption of any sensitive or critical areas regulations) for voluntarily creating buffers adjacent to a stream to protect the fish and wildlife habitat and protect water quality.
 - a. As an example the City could supply the materials and labor to install and maintain the fencing necessary to exclude livestock from the stream channel and its associated buffer as compensation for the voluntary establishment of buffers; or
 - b. The City could supply the materials and labor needed to install off-channel livestock watering facilities; or
 - c. The City would supply the farmer with a quantity of hay equivalent to the amount of hay lost due to creating the buffer set-aside.
 2. To fund this type of compensation program the City the City is hereby authorized to:
 - a. levy a conservation fee on all dairy and meat products sold at retail outlets located within the limits of the City; or
 - b. The City could negotiate a perpetual grant from the Salmon Recovery Fund to fund the projects and use a non-profit entity dedicated to salmon habitat restoration (i.e. Mid-sound Fisheries Enhancement Group) to implement the program.
- C. Open Space, Forestry, and Agricultural Current Use Assessment Programs:** Under established programs authorized by State law (RCW 83.34 and related sections) the Administrator could encourage an Applicant or Applicants as property owners to seek Property Tax Relief as compensation for establishing minimum required buffers adjacent to critical areas when the are exempt under the current EMC 19.02.
1. The Administrator is hereby authorized to develop a tax relief information packet and provide said packet to land owners in the City of Enumclaw and immediately surrounding areas.
 2. The Administrator would have the authority to prepare documents indicating the designation of property currently designated as Open Space, Forestry, Agricultural to Critical Area Buffer, a designation that should lower tax liability on the dedicated lands.
 3. The Administrator would also be authorized to prepare property tax relief requests for properties that an Applicant or Applicants designated as fish and wildlife habitat conservation areas or critical area buffers.

19.2.190 Critical area tracts and easements.

- A. Critical Area Management Tracts.** As a condition of any permit, the City may require the permit holder to create a separate critical area management tract containing the areas determined to be critical areas. Critical area management tracts are legally created tracts containing critical areas, and compensation areas that shall remain undeveloped in perpetuity, except for allowed activities pursuant to this chapter. Critical area management tracts are an integral part of the lot in which they are created,

are not intended for sale, lease or transfer, and shall be included in the area of the parent lot for purposes of subdivision method and minimum lot size.

- B. Protection of Critical Area Management Tracts.** The City may require, as a condition of any permit, that the critical area management tracts be protected and maintained in perpetuity by a critical area management easement which must be recorded. In addition, an entity that will be responsible for the maintenance and protection of the critical area tract must be designated as part of the permit.
- C. Marking during Construction.** The location of the outer extent of the critical area and the areas to be disturbed pursuant to an approved permit shall be marked in the field to prevent unnecessary disturbance by individuals and equipment during the development or construction of the permitted activity. Such field markings shall be approved by the city prior to the commencement of permitted activities. Such field markings shall be maintained throughout the duration of the permit.
- D. Permanent Marking.** The city may require the boundary of a critical area management tract be permanently identified by signs, the location, size, and wording of which must be approved by the administrator. These signs should be worded as follows: “Protection of this natural area is in your care. Alteration or disturbance is prohibited by law. Please call the city community development department for more information.”
- E. Additional Requirements.** Site specific criteria shall be developed to determine if additional conditions are warranted to insure the preservation and protection of critical areas are needed. These conditions include, but are not limited to, fencing, educational signage, and other passive recreational amenities.

19.2.200 Deed restrictions and Setbacks.

- A. Deed Restrictions.** The permit holder shall establish and record a permanent and irrevocable deed restriction on the property title of all lots containing critical area management tracts created as a condition of this permit. Such deed restriction(s) shall prohibit in perpetuity the development, alteration, or disturbance of vegetation within the critical area management tract except for allowed activities and regulated activities allowed by a permit issued pursuant to this chapter.
- B. Setbacks.** Building setbacks must be recorded on the property title for all critical areas identified and delineated on the project site and in close proximity of the project site. As it pertains to the provisions of this Chapter a building setback is an additional open area between the delineated edge of an identified critical area and a permanent structure or improvement.
 - 1.** Major structures and improvements shall be set back 25 feet from any landslide critical area tract, and 15 feet from any flood hazard zone, or erosion hazard critical area tract. Major structures and improvements shall be set back a minimum of 15 feet from the outer edge of any wetland or stream buffer
 - 2.** The Administrator may increase the setback to protect the proposal or adjacent properties from adverse impacts and may decrease the setback if the reduction does not result in significant adverse impacts to the proposal or adjacent properties. The setback can be decreased to no less than 10 feet.

Article V. Mitigation of Critical Area Impacts

19.2.210 Mitigation Sequencing – Decision Criteria.

- A. Eligibility for Reasonable Use Exception Application. Reasonable use exceptions do not apply in shoreline jurisdiction.**
- B. Compensatory Mitigation – Decision Criteria:** Compensatory mitigation for alterations to critical areas, particularly wetlands and fish and wildlife habitat conservations areas, shall, in a reasonable period of time, achieve equivalent or greater biologic function within the critical area altered or in a viable alternative mitigation area. Compensatory mitigation plans shall be consistent with Best Available Science (BAS), watershed approach to mitigating siting, as well as local knowledge and expertise.
 - 1.** Mitigation of critical area impacts associated with a proposed land use activity shall be required in the following order of preference:
 - a. Impact Avoidance:** Avoiding the impact altogether by not taking a certain action or parts of an action. When it has been demonstrated, to the satisfaction of the Administrator, that impact

avoidance is neither practical nor prudent, the Administrator shall approve one of the following, in descending order of preference;

- b. Impact Minimization:** Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts.
 - c. Impact Rectification:** Rectifying the impact by repairing, rehabilitating, or restoring the affected environment. This may include off-site mitigation areas and the restoration of previously impacted habitats in other critical areas, provided that a watershed approach to mitigating siting (see Ecology publication 09-06-032) is required; .
 - d. Impact Reduction over Time:** Reducing or eliminating the impact over time by preservation and maintenance operations.
 - e. Impact Compensation:** Compensating for the impact by replacing, enhancing, or providing substitute resources or environments. This may include mitigation alternatives such as wetland mitigation banking, fee-in-lieu, credit-debit method (reference Ecology Publication #10-06-011) and other creative approaches to mitigation that will result in a net increase in critical area function and value.
- C. Minimizing wetlands impacts – Decision Criteria.** After it has been determined by the City Council, based on information presented to the council by the Administrator and the Applicant, that the loss of critical areas is necessary and unavoidable or that all reasonable economic use has been denied,
- 1. The applicant shall implement project planning and implementation measures intended to minimize critical area impacts; and
 - 2. Efforts to minimize critical area impacts shall include, but are not limited to:
 - a. Limiting the degree or magnitude of the regulated activity;
 - b. Limiting the implementation of the regulated activity;
 - c. Using appropriate and best available technology;
 - d. Taking affirmative steps to avoid or reduce impacts;
 - e. Sensitive site design and siting of facilities and construction staging areas away from regulated wetlands and their buffers;
 - f. Involving resource agencies early in site planning; and
 - g. Providing protective measures such as siltation curtains, hay bales and other siltation prevention measures, scheduling the regulated activity to avoid interference with wildlife and fisheries rearing, nesting or spawning activities.

19.2.220 Mitigation plans.

- A.** All wetland enhancement, restoration, or creation projects required pursuant to this Chapter either as a permit condition or as the result of an enforcement action shall follow a mitigation plan prepared by a Qualified Professional and approved by the Administrator.
 - 1. Preparation of the mitigation report is an expense borne by applicant and/or violator.
 - 2. The minimum content of a critical area mitigation plan is outlined in Appendix C of this Chapter.
 - 3. Unless the Administrator, in consultation with a Qualified Professional, determines, based on the size and nature of the development proposal, the nature of the impacted wetland, and the degree of cumulative impacts on the wetland from other development proposals, that the scope and specific requirements of the mitigation plan may be reduced from what is listed in Appendix B, the mitigation plan shall include information in response to every item listed.
- B.** The applicant or violator shall receive written approval of the mitigation plan by the city prior to commencement of any wetland restoration, creation or enhancement activity.
- C.** Permit Conditions. Any compensation project prepared pursuant to this section and approved by the city shall become part of the application for the permit.
- D.** City personnel reviewing the mitigation plan and the Applicant’s consultants or staff preparing the

mitigation plan are encouraged to consult with and solicit comments of any federal, state, regional, or local agency, including tribes, having any special expertise with respect to any environmental impact prior to approving a mitigation proposal which includes wetlands compensation.

- E. The mitigation plan may be reviewed by other agency personnel for compliance with other State and Federal regulations. The Applicant is encouraged to provide sufficient, clear, and concise information regarding the proposed mitigation plan design and implementation in order for such agencies to comment on the overall adequacy of the mitigation proposal in a timely manner. Approval of a proposed mitigation plan by the City does not mean that the plan has been approved by other reviewing agencies.
- F. Compensatory wetland mitigation is not required for regulated activities:
 - 1. For which a permit has been obtained for critical area impacts that will only occur in the outer 50% of a buffer, or expanded buffer, and which have no adverse impacts to regulated wetlands or no significant reduction in buffer function and value; or
- G. Allowed activities pursuant to EMC 19.02.020.C provided such activities utilize best management practices to protect the functions and values of regulated wetlands.

19.2.230 – Critical Area Impact Mitigation

- A. As a condition of any permit allowing alteration of critical areas, or as an enforcement action pursuant to EMC 15.12.030, the City shall require that the applicant engage in the restoration, creation or enhancement of critical areas and their buffers in order to offset the impacts resulting from the applicant's actions.
- B. The applicant shall develop a plan (see Appendix C) that provides for land acquisition (if necessary), construction, maintenance and monitoring of replacement wetlands that provides equal or greater functions and values as the original wetlands.
- C. The overall goal of any critical areas mitigation project designed and implemented to compensate for wetland or fish and wildlife habitat conservation area impacts shall be no net loss of habitat (wetland, stream, riparian area, buffer, pond, etc.) functions and values and to strive for a net resource gain in habitat functions and values over present conditions. Compensation should be completed, whenever it is feasible, prior to any critical area alteration.
- D. **Mitigation for Lost or Affected Functions.** Compensatory mitigation actions shall address functions affected by the alteration to achieve functional equivalency or improvement and shall provide similar wetland functions as those lost, except when:
 - 1. The lost wetland provides minimal functions as determined by a site-specific function assessment, and the proposed compensatory mitigation action(s) will provide equal or greater functions or will provide functions shown to be limiting within a watershed through a formal Washington State Watershed Assessment Plan or similar protocol; or
 - 2. Out-of-kind replacement will best meet formally identified watershed goals, such as replacement of historically diminished wetland types.
- E. **Preference of Mitigation Actions.** Mitigation actions that require compensation by replacing, enhancing, or substitution shall occur in the following order of preference:
 - 1. Restoring wetlands on upland sites that were formerly wetlands.
 - 2. Creating wetlands on disturbed upland sites such as those with vegetative cover consisting primarily of non-native introduced species.
 - a. This should only be attempted when there is a consistent source of hydrology and it can be shown that the surface and subsurface hydrologic regime is conducive for the wetland community that is being designed.
 - 3. Enhancing significantly degraded wetlands in combination with restoration or creation. Such enhancement should be part of a mitigation package that includes replacing the impacted area

meeting appropriate ratio requirements.

- F. Type and Location of Mitigation.** Unless it is demonstrated that a higher level of ecological functioning would result from an alternate approach, compensatory mitigation for ecological functions shall be:
1. On-site compensation should be provided except where the applicant can demonstrate that:
 - a. The hydrology and ecosystem of the original wetland and those who benefit from the hydrology and ecosystem will not be significantly adversely impacted by the on-site loss; and
 - b. On-site compensation is not scientifically feasible due to problems with hydrology, soils, waves, or other factors; or
 - c. Compensation is not practical due to potentially adverse impact from surrounding land uses; or
 - d. Existing functional values at the site of the proposed restoration are significantly greater than lost wetland functional values; or
 - e. Local or regional goals for flood storage, flood conveyance, habitat or other wetland functions have been established and strongly justify location of compensatory measures at another site.
 2. Off-site compensation shall occur within the same watershed as the wetland loss occurred; provided, that Category IV wetlands may be replaced outside of the watershed when there is no reasonable alternative and local or regional environmental goals are furthered by this action.
 3. Either in-kind and on-site, or in-kind and within the same stream reach, sub-basin, or drift cell. Mitigation actions shall be conducted within the same sub-drainage basin and on the site as the alteration except when the all of the following apply:
 - a. There are no reasonable on-site or in-subdrainage basin opportunities or on-site and in-subdrainage basin opportunities do not have a high likelihood of success, after a determination of the natural capacity of the site to mitigate for the impacts. Consideration should include: anticipated wetland mitigation replacement ratios, buffer conditions and proposed widths, hydrogeomorphic classes of on-site wetlands when restored, proposed flood storage capacity, potential to mitigate riparian fish and wildlife impacts (such as connectivity);
 - b. Off-site mitigation has a greater likelihood of providing equal or improved wetland functions than the impacted wetland; and
 - c. Off-site locations shall be in the same sub-drainage basin unless:
 - (1) Established watershed goals for water quality, flood or conveyance, habitat, or other wetland functions have been established and strongly justify location of mitigation at another site; or
 - (2) Credits from a state certified wetland mitigation bank are used as mitigation and the use of credits is consistent with the terms of the bank's certification.
 4. In selecting compensation sites, applicants shall pursue mitigation sites in the following order of preference:
 - a. Degraded wetland sites;
 - b. Upland sites which were formerly wetlands;
 - c. Upland sites generally having bare ground or vegetative cover consisting primarily of exotic introduced species, weeds, or emergent vegetation;
 - d. Other disturbed upland. (Ord. 1960 § 3, 1998).
- G. Mitigation Timing.** It is preferred that compensatory mitigation projects be completed prior to activities that will disturb wetlands. At the least, compensatory mitigation shall be completed immediately following disturbance and prior to use or occupancy of the action or development. Construction of mitigation projects shall be timed to reduce impacts to existing fisheries, wildlife, and flora.
1. The Administrator may authorize a one-time temporary delay in completing construction or installation of the compensatory mitigation when the applicant provides a written explanation from a qualified wetland professional as to the rationale for the delay. An appropriate rationale would include identification of the environmental conditions that could produce a high probability of failure or significant construction difficulties (e.g., project delay lapses past a fisheries window, or installing plants should be delayed until the dormant season to ensure greater survival of installed materials). The delay shall not create or perpetuate hazardous conditions or environmental damage or

degradation, and the delay shall not be injurious to the health, safety, or general welfare of the public. The request for the temporary delay must include a written justification that documents the environmental constraints that preclude implementation of the compensatory mitigation plan. The justification must be verified and approved by the City.

- H. Mitigation Ratios:** Mitigation ratios refer to the amount of area required to mitigate a wetland impact or the mitigation effort required to mitigate wetland function and value lost in a smaller area than was impacted by a land use activity.
 - 1. **Acreage Replacement Ratios.** The ratios listed in Table 2c shall apply.
 - 2. **Buffer Mitigation Ratios.** Impacts to buffers shall be mitigated at 1:1 ratio. Compensatory buffer mitigation shall replace those buffer functions lost from development.
- I. Monitoring.** The mitigation plan shall include provisions for the compensatory project to be monitored for a period of at least five years or a period necessary to establish that performance standards have been met. For forested and scrub-shrub wetlands, the monitoring period shall be 10 years.

Table 2C: Wetland Mitigation Ratios

Category and Type of Wetland	Creation or Re-establishment	Rehabilitation	Enhancement	Preservation
Category I: Bog, Natural Heritage site	Not considered possible	6:1	Case by case	10:1
Category I: Mature Forested	6:1	12:1	24:1	24:1
Category I: Based on functions	4:1	8:1	16:1	20:1
Category II	3:1	6:1	12:1	20:1
Category III	2:1	4:1	8:1	15:1
Category IV	1.5:1	3:1	6:1	10:1

19.2.240 Alternative Mitigation Strategies

- A. Wetland Mitigation Banking and In-Lieu Fee (ILF) Mitigation Opportunities**
 - 1. Credits from a wetland mitigation bank or federally certified In-Lieu Fee (ILF) program may be approved for use as compensation for unavoidable impacts to wetlands, fish and wildlife conservation areas, and other aquatic resources when:
 - a. The bank is certified by WDOE under WAC 173-700 or by the federally certified ILF program is certified by the US Army corps of Engineers per Federal regulations (33 CFR Part 332 and 40 CFR Part 230, Subpart J);
 - b. The Administrator determines that the wetland mitigation bank or federally certified ILF program provides appropriate compensation for wetland, fish and wildlife conservation areas, or other aquatic resource impacts associated with the Applicants project; and
 - c. The proposed use of credits is consistent with the terms and conditions of the bank or ILF program’s certification.
 - 2. Replacement ratios for projects using bank or ILF program credits shall be consistent with replacement ratios specified in the bank or program’s certification.
 - 3. Credits from a certified wetland mitigation bank or ILF program may be used to compensate for impacts located within the service area specified in the bank or ILF program’s certification.
- B. Cooperative restoration, creation or enhancement projects.** The City may encourage, facilitate, and approve cooperative projects wherein a single applicant, group of applicants, or other entity with demonstrated capability may undertake a compensatory mitigation project with funding from each of the Applicants or another source under the following circumstances:

EMC 19.02 - Critical Areas Ordinance - City of Enumclaw

1. Restoration, creation, or enhancement at an individual location (site) may be scientifically or economically impractical, difficult, or impossible; or
2. Creation of one or several larger wetlands, riparian areas, or buffer area in an off-site location may be preferable to the mitigation of many small wetlands in their existing onsite locations, or.
3. Restoration/relocation of a previously degraded stream channel in conjunction with the creation of floodplain wetlands, riparian corridors, and enhanced buffers may have a greater benefit to fish and wildlife production in the watershed than smaller individual mitigation projects located within current or future project sites; and
4. The Applicant or Applicants proposing cooperative compensation projects shall:
 - a. Submit a Cooperative Project mitigation plan prepared by a Qualified Professional that contains the information required listed in Appendix B;
 - b. Demonstrate compliance with the provisions of this Chapter and all standards, rules, requirements, and regulations enforced by other resource management agencies with jurisdictional interest in the proposed project;
 - c. Demonstrate, in the form of contractual agreements or verifiable funding sources (i.e. an escrow account), that the organizational and fiscal capability to act cooperatively are in place and perpetual; and
 - d. Demonstrate that long term management capability can and will be provided through the entire life of the project; and
 - e. Obtain all state and federal permits and approvals necessary for the compensation project prior to making formal application to the City.
 - f. **NOTE:** This is an opportunity for individual land owners contemplating or anticipating future development opportunities to occur on the lands collectively to form a legal entity for the purpose of eliminating small, low function and value Category III and Category IV wetlands located on their individual properties and cooperatively mitigating the individual impacts in a larger offsite location in advance of the actual critical area impacts. The same concept can be used to restore and/or relocate stream habitat or to connect isolated areas of wildlife habitat.

19.2.250 Mitigation Area Performance Standards.

- A. Compensatory mitigation shall follow an approved mitigation plan pursuant to EMC 19.02.140(B)(9) and shall meet the following minimum performance standards:
 1. Given the uncertainties in scientific knowledge and the need for expertise and monitoring, critical area compensatory mitigation projects may be permitted only when the City finds that the mitigation project is associated with an activity or development otherwise permitted and that the restored, created, or enhanced wetland will be as persistent as the wetland it replaces.
 2. Additionally, Applicant shall:
 - a) Demonstrate sufficient scientific expertise (including current knowledge of best available science), supervisory capability, and financial resources to carry out the proposed mitigation project;
 - b) Demonstrate the capability to adequately monitor the site and to maintain (make corrections) the mitigation area during the monitoring period so the mitigation project does not fail to meet the environmental goals and performance standards defined in the approved mitigation plan ; and
 - c) Protect and manage, or provide for the protection and management, of the mitigation area to avoid future development related impacts or degradation within the mitigation area and to provide for long term persistence of the compensation area.
 3. Wetland functions and values shall be calculated using the best professional judgment of a Qualified Professional using the best available techniques.

APPENDIX A: Wetland Rating Criteria

Different types of wetlands are separated from one another on the basis of Wetland Class and Wetland Category. The former is a scientific system based upon dominant plant communities, substrate conditions, hydrologic regime, and location in the “watershed”. The latter is a categorization system used to regulate land uses adjacent to wetlands.

- A. **Wetland Class:** Wetland class is a science based classification system based on a U.S. Fish and Wildlife Service publication titled *Classification of Wetlands and Deepwater Habitats of the United States* that was edited by Lewis M. Cowardin et al and published in December 1979. Cowardin divides wetlands into five systems (Marine, Estuarine, Riverine, Lacustrine, and Palustrine), eight subsystems (Subtidal, Intertidal, Tidal, Lower Perennial, Upper Perennial, Intermittent, Limnetic, and Littoral), ten classes, and numerous modifiers. A combination of the system name, subsystem, name, class, and a modifier forms a code that identifies the wetland class.

WDOE expanded the term wetland class by incorporating use of the HGM (Hydrogeomorphic Method) classification into the Washington State Wetland Rating System for Western Washington (WDOE Publication No. 04-06-025). The HGM is based on the “landscape” location of a wetland or portion of a wetland. The HGM classes are Depressional, Riverine, Lake-fringe, Slope, Flats, and Freshwater Tidal.

- B. **Wetland Category:** In the City, Wetland Category is used to regulate activities within and adjacent to wetland and in determining the width of the wetland buffer. The wetland category is determined after a wetland has been identified and delineated. Wetland Category is determined using the Washington State Wetland Rating System for Western Washington (WDOE Publication No. 14-06-029 or as hereafter revised and approved by Ecology).

The WDOE document contains the definitions and scoring methods used for determining if the wetland rating criteria outlined in Appendix A of this Chapter are met. Note that streams and lakes are not rated as wetlands, but rather are classified and rated as Fish and Wildlife Conservation Areas (EMC 19.02.100).

- C. **Wetland Rating.** Wetlands shall be rated according to the Washington Department of Ecology wetland rating system, as set forth in the 2014 Wetland Rating System (Ecology Publication #14-06-029), or as revised and approved by Ecology), which contains the definitions and methods for determining whether the criteria below are met.

1. Category I. Category I wetlands are: (1) relatively undisturbed estuarine wetlands larger than one acre; (2) wetlands of high conservation value that are identified by scientists of the Washington Natural Heritage Program/DNR; (3) bogs; (4) mature and old-growth forested wetlands larger than one acre; (5) relatively undisturbed wetlands in coastal lagoons that are larger than 1/10 acre; (6) interdunal wetlands that score 8 or 9 habitat points and are larger than 1 acre; and (7) wetlands that perform many functions well (scoring 23 points or more). These wetlands: (1) represent unique or rare wetland types; (2) are more sensitive to disturbance than most wetlands; (3) are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; and (4) provide a high level of functions (23 points or more, out of 27).
2. Category II. Category II wetlands are: (1) estuarine wetlands smaller than 1 acre, or disturbed estuarine wetlands larger than 1 acre; (2) interdunal wetlands larger than 1 acre or those found in a mosaic of wetlands; (3) wetlands with a moderately high level of functions (scoring between 20 and 22 points).
3. Category III. Category III wetlands are: (1) wetlands with a moderate level of functions (scoring between 16 and 19 points); (2) can often be adequately replaced with a well-planned mitigation project; and (3) interdunal wetlands between 0.1 and 1 acre. Wetlands scoring between 16 and 19 points generally have been disturbed in some ways and are often less diverse or more isolated from

other natural resources in the landscape than Category II wetlands.

Category IV. Category IV wetlands have the lowest levels of functions (scoring fewer than 16 points) and are often heavily disturbed. These are wetlands that we should be able to replace, or in some cases to improve. However, experience has shown that replacement cannot be guaranteed in any specific case. These wetlands may provide some important functions, and should be protected to some degree.

APPENDIX B: Critical Area Report Content

NOTE: The information items listed below represent the minimum information requirements to be included in a Critical Area Report (refer also to Appendix E). Further, if a critical area report is required by the Administrator in accordance with (EMC Chapter 19.02 - Section 19.02.130, Section 19.02.130, and Appendix E), the applicant shall submit a critical area report prepared by a qualified professional as defined in Appendix D.

1. A description of the vegetative cover of the critical area and adjacent area including dominant species;
2. A site plan for the proposed activity at a scale no smaller than one inch equals 40 feet showing the location, width, depth and length of all existing and proposed structures, roads, sewage treatment, and installations within and adjacent to critical areas;
3. The exact sites and specifications for all regulated activities including the amounts and methods;
4. Elevations of the site and adjacent lands within the critical areas at contour intervals of no greater than two feet;
5. Typical cross-section views of the critical area to scale;
6. The purposes of the project and an explanation why the proposed activity cannot be located at other sites including an explanation of how the proposed activity is dependent upon critical areas;
7. A study of flood, erosion, or other hazards at the site and the effect of any protective measures that might be taken to reduce such hazards;
8. A Critical Areas Report that documents the ecological, aesthetic, economic, or other values of the critical areas, including a discussion of the methodology used to identify, delineate, and survey critical areas described in the report (refer to Appendix B);
9. A description of site development alternatives and an evaluation of those alternatives vis-à-vis any proposed critical area alterations. Include a rationale for not avoiding or minimizing impacts to critical areas identified within the project site;
10. A mitigation plan may be submitted to the Administrator at the time the Applicant submits a Critical Areas Permit (or a Type III through Type V permit application) or the applicant can defer submittal of the mitigation until after the preliminary project design has been reviewed by the Administrator. The Applicant will be required, however, to submit a Final Mitigation Plan describing mitigation projects for all unavoidable critical area impacts before any project permits are approved by the Administrator. The Final Mitigation Plan shall include baseline information, environmental goals and objectives, a Financial Guarantee quantity worksheet to bond the proposed mitigation activities, detailed construction plans, performance standards, a 3 to 5 year monitoring program, and a contingency plan.

APPENDIX C: Mitigation Plan Requirements

Mitigation Plan Requirements. When mitigation is required, the applicant shall submit, for approval by the Administrator, a mitigation plan as part of the Critical Area Report (unless a deferral is granted by the Administrator per Section 19.02.140.B.9). The mitigation plan shall include:

- A. Baseline Information. A written assessment and accompanying maps drawn to an appropriate scale of the:
 - 1 Impacted wetland including, at a minimum, wetland delineation; existing wetland acreage;

vegetative, faunal, and hydrologic characteristics; soil and substrate conditions; topographic elevations; and

2. Impacted wetland functions and values shall be described using the system approved by the Administrator;
3. Compensation site, if different from the impacted wetland site, including at a minimum: existing acreage; vegetative, faunal and hydrologic conditions; relationship within watershed and to existing water bodies; soil and substrate conditions; topographic elevations; existing and proposed adjacent site conditions; buffers; and ownership.

B. Environmental Goals and Objectives. The mitigation plan shall include a written report identifying environmental goals and objectives of the compensation proposed and including:

1. A description of the anticipated impacts to the critical areas and the mitigating actions proposed and the purposes of the compensation measures, including the site selection criteria; identification of compensation goals; identification of resource functions; and dates for beginning and completion of site compensation construction activities. The goals and objectives shall be related to the functions and values of the impacted critical area;
2. A review of the best available science supporting the proposed mitigation and a description of the report author's experience to date in restoring or creating the type of critical area proposed; and
3. An analysis of the likelihood of success of the compensation project duplicating the original wetland shall be provided based on the experiences of comparable projects, if any.
4. An analysis of the likelihood of persistence of the created or restored wetland shall be provided based on such factors as surface and ground water supply and flow patterns, dynamics of the wetland ecosystem, sediment or pollutant influx and/or erosion, periodic flooding and drought, etc., presence of invasive flora or fauna, potential human or animal disturbance, and previous comparable projects, if any..

C. Performance Standards. The mitigation plan shall include measurable specific criteria for evaluating whether or not the goals and objectives of the mitigation project have been successfully attained and whether or not the requirements of this Chapter have been met. Such criteria may include water quality standards, survival rates of planted vegetation, species abundance and diversity targets, habitat diversity indices, or other ecological, geological, or hydrological criteria.

D. Detailed Construction Plans. The mitigation plan submitted to the Administrator for review and approval shall include written specifications and descriptions of the mitigation proposed, such as:

1. The proposed construction sequence, timing, and duration;
2. Grading and excavation details;
3. Erosion and sediment control features needed for wetland construction and long term survival;
4. A planting plan specifying plant species, quantities, locations, size, spacing, and density; source of plant materials, propagules, or seeds; water and nutrient requirements for planting; planting instructions, and where appropriate, measures to protect plants from predation;
5. Specification of substrate stockpiling techniques and soil augmentation instructions;
6. Specifications for supplemental irrigation systems and a description of conditions that warrant supplemental irrigation;
7. Descriptions of water control and water-level maintenance practices needed to achieve the necessary hydrocycle/hydroperiod characteristics; etc.and
8. Measures required for protecting and maintaining plants until they are established, including staking of tree species for a period of 5 years.

These written specifications shall be accompanied by detailed site diagrams, scaled cross-sectional drawings, topographic maps prepared by a PLS (Professional Licensed Surveyor) licensed in the State of Washington showing slope percentage and final grade elevations, and any other drawings appropriate to show construction techniques or anticipated final outcome. The plan shall provide for elevations which are appropriate for the desired habitat type(s).

- E. **Monitoring Program.** A program outlining the approach for monitoring construction of the compensation project and for assessing a completed project shall be provided. Monitoring may include, but is not limited to, one or more of the following:
1. Establishing vegetation plots to track changes in plant species composition and density over time;
 2. Using photo stations to evaluate vegetation community response;
 3. Sampling surface and subsurface waters to determine pollutant loading, and changes from the natural variability of background conditions (pH, nutrients, heavy metals);
 4. Measuring base flow rates and storm water runoff to model and evaluate water quality predictions, if appropriate;
 5. Measuring sedimentation rates, if applicable; and
 6. Sampling fish and wildlife populations to determine habitat utilization, species abundance and diversity.

A protocol shall be included outlining how the monitoring data will be evaluated by agencies that are tracking the progress of the compensation project. The plan will identify the Applicant's responsibility for completing an "as-built" survey of the mitigation site after the planting has been completed. A monitoring report documenting milestones, successes, problems, maintenance activities, and contingency actions of the compensation project shall be submitted to the Administrator annually, at a minimum, no later than November 15th each year. The first years mitigation monitoring report will include a copy of the "as-built" survey.

The compensation project shall be monitored for a period necessary to establish that performance standards have been met, but not for a period less than three (3) to five (5) years, with 3 to 5 years being authorized by the Administrator only when there is overwhelming evidence that the environmental goals and objectives of the mitigation site have been achieved.

- F. **Contingency Plan.** The mitigation plan shall include identification of potential courses of action, and any corrective measures to be taken if monitoring or evaluation indicates project performance standards are not being met.
- G. **Demonstration of Competence.** A demonstration of financial resources, administrative, supervisory, and technical competence and scientific expertise of sufficient standing to successfully execute the compensation project shall be provided. A compensation project manager shall be named and the qualifications of each team member involved in preparing the mitigation plan and implementing and supervising the project shall be provided, including educational background and areas of expertise, training and experience with comparable projects.
- H. **Financial Guarantees.** The mitigation plan shall include financial guarantees, as determined by the Administrator, to ensure that the mitigation plan is fully implemented. Financial guarantees ensuring fulfillment of the compensation project, monitoring program, and any contingency measures shall be posted in accordance with Section 19.02.180.B.

APPENDIX D: Definitions

The definitions provided in this Appendix apply to the critical area regulations in Chapter EMC 19.02.

Agricultural drainage: Any stream, ditch, tile system, pipe or culvert primarily used to drain fields for horticultural or livestock activities.

Agricultural Land: Any land used primarily used for cultivation, farming, horticultural or livestock activities, consistent with RCW 84.33.100 thru 84.33.140.

Alteration: Any human activity that results or is likely to result in an impact upon the existing condition of a critical area or its buffer. "Alteration" includes, but is not limited to, grading, filling, dredging, channelizing,

applying herbicides or pesticides or any hazardous substance, discharging pollutants except stormwater, grazing domestic animals, paving, constructing, applying gravel, modifying topography for surface water management purposes, cutting, pruning, topping, trimming, relocating or removing vegetation or any other human activity that results or is likely to result in an impact to existing vegetation, hydrology, fish or wildlife or their habitats. "Alteration" does not include passive recreation such as walking, fishing or any other similar activities.

Applicant: A property owner, a public agency or a public or private utility that owns a right-of-way or other easement or has been adjudicated the right to such an easement under RCW 8.08.040, or any person or entity designated or named in writing by the property or easement owner to be the applicant, in an application for a development proposal, permit or approval.

Aquatic area: Any non-wetland water feature including all shorelines of the state, rivers, streams, marine waters, inland bodies of open water including lakes and ponds, reservoirs and conveyance systems and impoundments of these features if any portion of the feature is formed from a stream or wetland and if any stream or wetland contributing flows is not created solely as a consequence of stormwater pond construction. "Aquatic area" does not include water features that are entirely artificially collected or conveyed storm or wastewater systems or entirely artificial channels, ponds, pools or other similar constructed water features.

Bank stabilization: An action taken to minimize or avoid the erosion of materials from the banks of rivers and streams.

Base Flood: For purposes of development proposals in a flood hazard area, the 100 year flood event.

Basement: For purposes of development proposals in a flood hazard area, any area of a building where the floor subgrade is below ground level on all sides.

Best management practice: A schedule of activities, prohibitions of practices, physical structures, maintenance procedures and other management practices undertaken to reduce pollution or to provide habitat protection or maintenance.

Bioengineering: The use of vegetation and other natural materials such as soil, wood and rock to stabilize soil, typically against slides and stream flow erosion. When natural materials alone do not possess the needed strength to resist hydraulic and gravitational forces, "bioengineering" may consist of the use of natural materials integrated with human-made fabrics and connecting materials to create a complex matrix that joins with in-place native materials to provide erosion control.

Buffer: A natural, preferably undisturbed area, contiguous to a critical area; an area designated to separate and protect a critical area from potential impacts associated adjacent land use activities; an area of natural or native growth required to support the functions and stability of a critical area.

Channel: A feature that contains and was formed by periodically or continuously flowing water confined by banks.

Channel edge: The outer edge of the water's bankfull width or, where applicable, the outer edge of the associated channel migration zone.

Channel migration zone: Those areas within the lateral extent of likely stream channel movement that are subject to risk due to stream bank destabilization, rapid stream incision, stream bank erosion and shifts in the location of stream channels, as shown on Enumclaw's Channel Migration Zone maps. "Channel migration zone" means the corridor that includes the present channel, the severe channel migration hazard area and the moderate channel migration hazard area. "Channel migration zone" does not include areas that lie behind an arterial road, a public road serving as a sole access route, a state or federal highway or a railroad. "Channel migration zone" may exclude areas that lie behind a lawfully established flood protection facility that is likely to be maintained by existing programs for public maintenance consistent with designation and classification

criteria specified by public rule. When a natural geologic feature affects channel migration, the channel migration zone width will consider such natural constraints.

Clearing: Cutting, killing, grubbing or removing vegetation or other organic plant material by physical, mechanical, chemical or any other similar means. For the purpose of this definition of "clearing," "cutting" means the severing of the main trunk or stem of woody vegetation at any point.

Critical Aquifer Recharge Area: An area designated on the critical aquifer recharge area map adopted by EMC 19.02. that has a high susceptibility to ground water contamination or an area of medium susceptibility to ground water contamination that is located within a sole source aquifer or within an area approved in accordance with chapter 246-290 WAC as a wellhead protection area for a municipal or district drinking water system, or an area over a sole source aquifer for a private potable water well in compliance with Washington State Department of Ecology (WDOE) and Public Health standards. Susceptibility to ground water contamination occurs where there is a combination of permeable soils, permeable subsurface geology and ground water close to the ground surface.

Critical area: Any area that is subject to natural hazards or a land feature that supports unique, fragile or valuable natural resources including fish, wildlife or other organisms or their habitats or such resources that carry, hold or purify water in their natural state. "Critical areas" includes the following areas:

- A. Frequently flooded areas,
- B. Geologically hazardous (including mine hazard areas, erosion hazard areas, landslide hazard areas; steep slope hazard areas; seismic areas, and volcanic hazard areas),
- C. Critical aquifer recharge areas,
- D. Wetlands,
- E. Fish and Wildlife Habitat Conservation Areas (including streams, rivers, ponds, lakes, estuaries, other aquatic areas, large concentrations of forested habitat within urban areas); and
- F. Buffers associated with those critical areas.

Ditch: An artificial open channel used or constructed for the purpose of conveying water.

Drainage basin: A drainage area that drains to the Green River or White River or other drainage area that drains directly to Puget Sound.

Drainage facility: A feature, constructed or engineered for the primary purpose of providing drainage, that collects, conveys, stores or treats surface water. A drainage facility may include, but is not limited to, a stream, pipeline, channel, ditch, gutter, lake, wetland, closed depression, flow control or water quality treatment facility and erosion and sediment control facility.

Drainage subbasin: A drainage area identified as a drainage subbasin in a City approved basin plan or, if not identified, a drainage area that drains to a body of water that is named and mapped and contained within a drainage basin.

Emergency: An occurrence during which there is imminent danger to the public health, safety and welfare, or that poses an imminent risk of property damage or personal injury or death as a result of a natural or human-made catastrophe.

Engineer, civil, geotechnical and structural: Shall mean the following:

- A. Civil engineer: an engineer who is licensed as a professional engineer in the branch of civil engineering by the state of Washington;
- B. Geotechnical engineer: an engineer who is licensed as a professional engineer by the state of Washington and who has at least four years of relevant professional employment; and
- C. Structural engineer: an engineer who is licensed as a professional engineer in the branch of structural engineering by the state of Washington.

Enhancement: For the purposes of critical area regulation, an action that improves the processes, structure and functions of ecosystems and habitats associated with critical areas or their buffers.

Erosion: The wearing away of the ground surface as the result of the movement of wind, water or ice.

Erosion hazard area: An area underlain by soils that is subject to severe erosion when disturbed. These soils include, but are not limited to, those classified as having a severe to very severe erosion hazard according to the United States Department of Agriculture Soil Conservation Service, the 1973 King County Soils Survey or any subsequent revisions or addition by or to these sources such as any occurrence of River Wash ("Rh") and any of the following when the soils occur on slopes inclined at fifteen percent or more:

- A. Alderwood gravely sandy loam ("AgD");
- B. Alderwood and Kitsap soils ("AkF");
- C. Beausite gravely sandy loam ("BeD" and "BeF");
- D. Kitsap silt loam ("KpD");
- E. Ovall gravely loam ("OvD" and "OvF");
- F. Ragnar fine sandy loam ("RaD"); and
- G. Ragnar-Indianola Association ("RdE").

Federal Emergency Management Agency: The independent federal agency that, among other responsibilities, oversees the administration of the National Flood Insurance Program.

Fish and wildlife habitat conservation areas: areas that serve a critical role in sustaining needed habitats and species for the functional integrity of the ecosystem, and which, if altered, may reduce the likelihood that the species will persist over the long term. These areas may include, but are not limited to, rare or vulnerable ecological systems, communities, and habitat or habitat elements including seasonal ranges, breeding habitat, winter range, and movement corridors; and areas with high relative population density or species richness. Counties and cities may also designate locally important habitats and species.

- a) *Habitats of local importance* designated as fish and wildlife habitat conservation areas include those areas found to be locally important by counties and cities.
- b) *Fish and wildlife habitat conservation areas* does not include such artificial features or constructs as irrigation delivery systems, irrigation infrastructure, irrigation canals, or drainage ditches that lie within the boundaries of, and are maintained by, a port district or an irrigation district or company, unless the following are present:
 - 1. Used by salmonids; or
 - 2. Used to convey a stream that occurred naturally before construction of the artificial channel.

Flood fringe,: That portion of the floodplain outside of the zero-rise floodway.

Area of Special Flood Hazard: the land in the flood plain within a community subject to one percent or greater chance of flooding in any given year. Designation on maps always includes the letter A or V.

Flood Insurance Rate Map (FIRM): the official map on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community. .

Floodway: The area that has been established in effective federal emergency management agency flood insurance rate maps or floodway maps. The floodway does not include lands that can reasonably be expected to be protected from flood waters by flood control devices maintained by or maintained under license from the federal government, the state, or a political subdivision of the state.

Footprint: The area encompassed by the foundation of a structure including building overhangs if the overhangs do not extend more than eighteen inches beyond the foundation and excluding uncovered decks.

Forest practice: Any forest practice as defined in RCW 79.06.020.

Geologist: See definition of "Professional, Qualified".

Geologically hazardous areas: areas that because of their susceptibility to erosion, sliding, earthquake, or other geological events, are not suited to the siting of commercial, residential, or industrial development consistent with public health or safety concerns.

Grade: Grade: the elevation of the ground surface. "Existing grade," "finish grade" and "rough grade" are defined as follows:

- A. "Existing grade" means the grade before grading;
- B. "Finish grade" means the final grade of the site that conforms to the approved plan as required under EMC 19.01.090; and
- C. "Rough grade" means the grade that approximately conforms to the approved plan as required under EMC 19.01.090.

Groundcover: Competitive living plant species normally growing up to a maximum of 24 inches in height.

Habitat: The locality, site and particular type of environment occupied by an organism at any stage in its life cycle.

Impacts: "Impacts" means the effects or consequences of actions. Environmental impacts are effects upon the elements of the environment listed in WAC 197-11-444.

Impervious surface: A non-vertical surface artificially covered or hardened so as to prevent or impede the percolation of water into the soil mantle at natural infiltration rates including, but not limited to, roofs, swimming pools and areas that are paved, graveled or made of packed or oiled earthen materials such as roads, walkways or parking areas. "Impervious surface" does not include landscaping and surface water flow control and water quality treatment facilities.

Infiltration Rate: The rate of transmission of water through soil, measured inches per hour, or similar measurement unit.

Instream structure: Anything placed or constructed below the ordinary high water mark, including, but not limited to, weirs, culverts, fill and natural materials and excluding dikes, levees, revetments and other bank stabilization facilities.

Invasive vegetation: A plant species listed as obnoxious or noxious weeds on a noxious weed and/or invasive plant list adopted by King County, by the State of Washington, or by the Federal Government.

Landslide hazard area: An area subject to severe risk of landslide, such as:

- A. An area with a combination of:
 - 1. Slopes steeper than fifteen percent of inclination;
 - 2. Impermeable soils, such as silt and clay, frequently interbedded with granular soils, such as sand and gravel; and
 - 3. Springs or ground water seepage;
- B. An area that has shown movement during the Holocene epoch, which is from ten thousand years ago to the present, or that is underlain by mass wastage debris from that epoch;
- C. An area potentially unstable as a result of rapid stream incision, stream bank erosion or undercutting by wave action;
- D. An area that shows evidence of or is at risk from snow avalanches; or
- E. An area located on an alluvial fan, presently or potentially subject to inundation by debris flows or deposition of stream-transported sediments.

Lowest Floor: the lowest enclosed area (including the basement). An unfinished or flood resistant enclosure, useable solely for parking of vehicles, building access, or storage in an area other than a basement area, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this ordinance.

Maintenance: The usual acts to prevent a decline, lapse or cessation from a lawfully established condition without any expansion of or significant change from that originally established condition. Activities within landscaped areas within areas subject to native vegetation retention requirements may be considered "maintenance" only if they maintain or enhance the canopy and understory cover. "Maintenance" includes repair work but does not include replacement work. When maintenance is conducted specifically in accordance with the Regional Road Maintenance Endangered Species Act Program Guidelines, the definition of "maintenance" in the glossary of those guidelines supersedes the definition of "maintenance" in this section.

Mitigation: An action taken to compensate for adverse impacts to the environment resulting from a development activity or alteration. (*see compensatory mitigation in Article V, Section 19.02.230 B*)

Mitigation bank: A property that has been protected in perpetuity and approved by appropriate county, state and federal agencies expressly for the purpose of providing compensatory mitigation in advance of authorized impacts through any combination of restoration, creation or enhancement of wetlands and, in exceptional circumstances, preservation of adjacent wetlands and wetland buffers or protection of other aquatic or wildlife resources.

Monitoring: Active management, reporting, measurement, and checking the progress of site restoration, enhancement, or rehabilitation efforts over a period of time; generally the time period is established by the code.

Mulch: Organic material used to cover ground to retain moisture and control weeds.

Native Growth Protection Area (NGPA): An area where native vegetation is preserved for the purpose of preventing harm to property and the environment, including but not limited to, controlling surface water runoff, preventing or minimizing surface soil erosion, maintaining slope stability, buffering critical areas from potential impacts associated with adjacent land use activities, and protecting/preserving wildlife habitat. Typically the term NGPA is synonymous with the term buffer or buffer zone.

Native vegetation: Plant species indigenous to the Puget Sound region that reasonably could be expected to naturally occur on the site.

Net buildable area: The "site area" less the following areas:

- A. Areas within a project site that are required to be dedicated for public rights-of-way in excess of sixty feet in width;
- B. Critical areas and their buffers to the extent they are required by EMC 19.02 to remain undeveloped;
- C. Areas required for storm water control facilities other than facilities that are completely underground, including, but not limited to, retention or detention ponds, biofiltration swales and setbacks from such ponds and swales;
- D. Areas required to be dedicated or reserved as on site recreation areas;
- E. Regional utility corridors; and
- F. Other areas, excluding setbacks, required to remain undeveloped.

Noxious weed: A plant species that is typically non-native, invasive, highly destructive, competitive or difficult to control by cultural or chemical practices, limited to any plant species listed on the state noxious weed list in chapter 16-750 WAC, regardless of the list's regional designation or classification of the species. Noxious weeds may also possess characteristics that gain cause distress or even death on animals that consume the plants.

Ordinary high water mark: The mark found by examining the bed and banks of a stream, lake, pond water and ascertaining where the presence and action of waters are so common and long maintained in ordinary years as to mark upon the soil a vegetative character distinct from that of the abutting upland. In an area where the ordinary high water mark cannot be found, the line of mean high water in areas adjoining freshwater is the "ordinary high water mark." In an area where neither can be found, the top of the channel bank is the "ordinary high water mark." In braided channels and alluvial fans, the ordinary high water mark or line of mean high water include the entire water or stream feature.

Professional, Qualified: "Qualified Professional" means a person with training and experience in the scientific discipline, and who is a qualified scientific expert with expertise in streams, wetlands or lakes subject matter in accordance with WAC 365-195-905(4). A qualified professional must have obtained a Bachelor of Science degree in hydrology, soil science, botany, ecology, or related field from an accredited college or university or who has equivalent educational training and professional experience related to the subject of habitat or species. Also includes fluvial morphologist if stream relocation is involved. Geologists are included as those professionals who hold active license from the state of Washington Geology Board. A qualified professional for wetlands must be a professional wetland scientist with at least two years of full-time work experience as a wetlands professional, including delineating wetlands using the federal manual and supplements, preparing wetlands reports, conducting function assessments, and developing and implementing mitigation plans.

Public road right-of-way structure: The existing, maintained, improved road right-of-way or railroad prism and the roadway drainage features including ditches and the associated surface water conveyance system, flow control and water quality treatment facilities and other structures that are ancillary to those facilities including catch-basins, access holes and culverts.

Reasonable Use Exception. Discretionary review process to determine the minimum permitted use possible of a site when the site is 65% to 100% covered by critical areas and associated buffers, and the critical area designation precludes the zoned allowable use of the parcel.

Reclamation: The final grading and restoration of a site to reestablish the vegetative cover, soil stability and surface water conditions to accommodate and sustain all permitted uses of the site and to prevent and mitigate future environmental degradation.

Regional road maintenance guidelines: The National Marine Fisheries Service-published Regional Road Maintenance Endangered Species Act Program Guidelines.

Repair: To fix or restore to sound condition after damage. "Repair" does not include replacement of structures or systems.

Replace: To take or fill the place of a structure, fence, deck or paved surface with an equivalent or substitute structure, fence, deck or paved surface that serves the same purpose. "Replacement" may or may not involve an expansion.

Restoration: For purposes of critical areas regulation, an action that reestablishes the structure and functions of a critical area or any associated buffer that has been altered.

Roadway: The maintained areas cleared and graded within a road right-of-way or railroad prism. For a road right-of-way, "roadway" includes all maintained and traveled areas, shoulders, pathways, sidewalks, ditches and cut and fill slopes. For a railroad prism, "roadway" includes the maintained railroad bed, shoulders, and cut and fill slopes. "Roadway" is equivalent to the "existing, maintained, improved road right-of-way or railroad prism" as defined in the regional road maintenance guidelines.

Salmonid: A member of the fish family Salmonidae, including, but not limited to:

A. Chinook, coho, chum, sockeye and pink salmon;

- B. rainbow, steelhead and cutthroat salmon, which are also known as trout;
- C. brown trout;
- D. brook, bull trout, which is also known as char, and Dolly Varden char;
- E. kokanee; and
- F. pygmy whitefish.

Salmonid Migration Barrier: “Salmonid Migration Barrier” means an in-stream blockage that consists of a natural gradient drop (no human influence) with an uninterrupted slope greater than 100-percent (45 degree angle and height in excess of 11 vertical feet with anadromous salmon-bearing waters or a height of 3 vertical feet within resident trout only bearing waters. Culverts and weirs meet the definition, yet are subject to the Director’s determination of whether the barrier must be removed or may remain, based on factors including impacts to existing systems and significant expense.

Setback: Required distance of separation from the edge of critical area buffer to the face of a structure free of all structures.

Shoreline: Those lands defined as shorelines of the state in the Shorelines Management Act of 1971, chapter 90.58 RCW, as amended or updated.

Shrub: Evergreen or deciduous plant species that grows to a maximum of 24 inches to 30 feet in height.

Side channel: A channel that is secondary to and carries water to or from the main channel of a stream or the main body of a lake or estuary, including a back-watered channel or area and oxbow channel that is still connected to a stream by one or more aboveground channel connections or by inundation at the base flood.

Site area: The total horizontal area of a project site.

Steep slope hazard area: An area on a slope of forty percent inclination or more within a vertical elevation change of at least twenty feet. For the purpose of this definition, a slope is delineated by establishing its toe and top and is measured by averaging the inclination over at least ten feet of vertical relief. Also for the purpose of this definition:

- A. The "toe" of a slope means a distinct topographic break in slope that separates slopes inclined at less than forty percent from slopes inclined at forty percent or more. Where no distinct break exists, the "toe" of a slope is the lower most limit of the area where the ground surface drops ten feet or more vertically within a horizontal distance of twenty-five feet; and
- B. The "top" of a slope is a distinct topographic break in slope that separates slopes inclined at less than forty percent from slopes inclined at forty percent or more. Where no distinct break exists, the "top" of a slope is the upper most limit of the area where the ground surface drops ten feet or more vertically within a horizontal distance of twenty-five feet.

Stream: An aquatic area where surface water produces a channel, not including a wholly artificial channel, unless it is:

- A. Used by salmonids; or
- B. Used to convey a stream that occurred naturally before construction of the artificial channel.

Substantial Damage: Per Code of Federal Regulations (CFR) Title 44. Emergency Management and Assistance, Section 59.1, Definitions, damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Substantial Improvement: any repair, reconstruction, or improvement to a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:

- c) Before the improvement is started; or
- d) If the structure has been damaged and is being restored, before the damage occurred.

This term does not, however, include either:

1. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are necessary to assure safe living conditions; or
2. Any alteration of a structure listed in the National, State, or Local Register of Historic Places.

Surface water conveyance: A drainage facility designed to collect, contain and provide for the flow of surface water from the highest point on a development site to receiving water or another discharge point, connecting any required flow control and water quality treatment facilities along the way. "Surface water conveyance" includes but is not limited to, gutters, ditches, pipes, biofiltration swales and channels.

Surface water discharge: The flow of surface water into receiving water or another discharge point.

Swale: See definition of ditch (above).

Swale, vegetated: Ditch or flat terrain with sheet flow of water for periods of time that supports vegetative ground cover.

Tree, hazard: Any tree with a structural defect, combination of defects or disease resulting in structural defect that, under the normal range of environmental conditions at the site, will result in the loss of a major structural component of that tree in a manner that will:

- A. Damage a residential structure or accessory structure, place of employment or public assembly or approved parking for a residential structure or accessory structure or place of employment or public assembly;
- B. Damage an approved road or utility facility; or
- C. Prevent emergency access in the case of medical hardship.

Utility corridor: A narrow strip of land containing underground or above-ground utilities and the area necessary to maintain those utilities. A "utility corridor" is contained within and is a portion of any utility right-of-way or dedicated easement.

Utility facility: A facility for the distribution or transmission of services, including:

- A. Telephone exchanges, except for telecommunications facilities;
- B. Water pipelines, pumping or treatment stations;
- C. Electrical substations;
- D. Water storage reservoirs or tanks;
- E. Municipal groundwater well-fields;
- F. Regional surface water flow control and water quality facilities;
- G. Natural gas pipelines, gate stations and limiting stations;
- H. Propane, compressed natural gas and liquefied natural gas storage tanks serving multiple lots or uses from which fuel is distributed directly to individual users;
- I. Wastewater pipelines, lift stations, pump stations, regulator stations or odor control facilities; and
- J. Communication cables, electrical wires and associated structural supports.

Wet meadow, grazed or tilled: An emergent wetland that has grasses, sedges, rushes or other herbaceous vegetation as its predominant vegetation and has been previously converted to agricultural activities.

Wetland: As per RCW 36.70A.030(20), "Wetland" or "wetlands" means areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland

areas created to mitigate conversion of wetlands.

Wetland Category: Wetland category is determined using a regulatory classification system defined in current State and local wetlands or critical areas management regulations. The current rating system used to define wetland category within the City of Enumclaw is noted in EMC 19.02.090.B.

Wetland Class: Wetland class is determined through use of an ecological classification system found in “Classification of Wetlands and Deepwater Habitats of United States” written by Lewis M. Cowardin, Virginia Carter, Francis C. Golet, and Edward T. LaRoe and published by the U.S. Department of the Interior, Fish and Wildlife Service (Publication No. FWS/OBS 79/31, December 1979).

Wetland complex: A grouping of two or more wetlands, not including grazed wet meadows, that meet the following criteria:

- A. Each wetland included in the complex is within five hundred feet of the delineated edge of at least one other wetland in the complex;
- B. The complex includes at least:
 1. one wetland classified category I or II;
 2. three wetlands classified category III; or
 3. four wetlands classified category IV;
- C. The area between each wetland and at least one other wetland in the complex is predominately vegetated with shrubs and trees; and
- D. There are not any barriers to migration or dispersal of amphibian, reptile or mammal species that are commonly recognized to exclusively or partially use wetlands and wetland buffers during a critical life cycle stage, such as breeding, rearing or feeding.

Wetland creation: For purposes of wetland mitigation, the manipulation of the physical, chemical, or biological characteristics present to develop a wetland on an upland or deepwater site, where a wetland did not previously exist. Activities to create a wetland typically involve excavation of upland soils to elevations that will produce a wetland hydroperiod, create hydric soils and support the growth of hydrophytic plant species. Wetland creation results in a gain in wetland acres.

Wetland edge: The line delineating the outer edge of a wetland, consistent with the wetland delineation manual required by RCW 36.70A.175.

Wetland enhancement: The manipulation of the physical, chemical, or biological characteristics of a wetland site to heighten, intensify or improve specific functions or to change the growth state or composition of the vegetation present. Enhancement is undertaken for specified purposes such as water quality improvement, flood water retention or wildlife habitat. Wetland enhancement activities typically consist of planting vegetation, controlling nonnative or invasive species, modifying site elevations or the proportion of open water to influence hydro-periods or some combination of these. Wetland enhancement results in a change in some wetland functions and can lead to a decline in other wetland functions, but does not result in a gain in wetland acres. Wetland enhancement can result in a change of wetland class or wetland category or both.

Wetland, forested: A wetland that is dominated by mature woody vegetation or a wetland vegetation class that is characterized by woody vegetation at least twenty feet tall.

Wetland, isolated: An area that is not connected to any waters of the state under normal circumstances and weather patterns, up to the 100 year storm event.

Wetland rehabilitation: Wetland rehabilitation is very similar to wetland enhancement except that the activities generally do not result in a change of wetland class or wetland category nor is there a net increase in wetland area. The term wetland improvement is generally synonymous with the wetland rehabilitation.

Wetland restoration: For purposes of wetland mitigation wetland restoration means the manipulation of the

physical, chemical, or biological characteristics of a site with the goal of returning natural or historic wetland functions to a previously filled or substantially degraded wetland. Activities typically required to reestablish a wetland include removing fill material, importing hydric soil, grading wetland area, altering human-made drainage features, and installing appropriate native plants. Wetland restoration can result in a gain in both wetland acres and wetland function. Wetland rehabilitation results in a gain in wetland function but does not result in a gain in wetland acres.

Wetland vegetation classes: A wetland community classified under the Cowardin naming system or by its vegetation description including aquatic bed, emergent, forested and shrub-scrub. To constitute a separate wetland vegetation class, the vegetation must be at least partially rooted within the wetland and must occupy the uppermost stratum of a contiguous area or comprise at least thirty percent areal coverage of the entire wetland.

Wildlife: Birds, fish and animals, that are not domesticated and are considered to be wild.

APPENDIX E: Critical Area Identification Form

APPENDIX F: Critical Area Buffer Risk and Opportunity Rating Form

(The rating form follows this page)

APPENDIX G: WAC 220-16-030 (Rev. 2004)

WAC 222-16-030 Water typing system. Until the fish habitat water type maps described below are adopted by the board, the Interim Water Typing System established in WAC 222-16-031 will continue to be used. The department in cooperation with the departments of fish and wildlife, and ecology, and in consultation with affected Indian tribes will classify streams, lakes and ponds. The department will prepare water type maps showing the location of Type S, F, and N (Np and Ns) Waters within the forested areas of the state. The maps will be based on a multi-parameter, field-verified geographic information system (GIS) logistic regression model. The multi-parameter model will be designed to identify fish habitat by using geomorphic parameters such as basin size, gradient, elevation and other indicators. The modeling process shall be designed to achieve a level of statistical accuracy of 95% in separating fish habitat streams and non-fish habitat streams. Furthermore, the demarcation of fish and non-fish habitat waters shall be equally likely to over and under estimate the presence of fish habitat. These maps shall be referred to as "fish habitat water typing maps" and shall, when completed, be available for public inspection at region offices of the department.

Fish habitat water type maps will be updated every five years where necessary to better reflect observed, in-field conditions. Except for these periodic revisions of the maps, on-the-ground observations of fish or habitat characteristics will generally not be used to adjust mapped water types. However, if an on-site interdisciplinary team using non-lethal methods identifies fish, or finds that habitat is not accessible due to naturally occurring conditions and no fish reside above the blockage, then the water type will be immediately changed to reflect the findings of the interdisciplinary team. The finding will be documented on a water type update form provided by the department and the fish habitat water type map will be updated as soon as practicable. If a dispute arises concerning a water type the department shall make available informal conferences, as established in WAC 222-46-020 which shall include the departments of fish and wildlife, and ecology, and affected Indian tribes and those contesting the adopted water types.

The waters will be classified using the following criteria:

***(1) "Type S Water"** means all waters, within their bankfull width, as inventoried as "shorelines of the state" under chapter 90.58 RCW and the rules promulgated pursuant to chapter 90.58 RCW including periodically inundated areas of their associated wetlands.

***(2) "Type F Water"** means segments of natural waters other than Type S Waters, which are within the bankfull widths of defined channels and periodically inundated areas of their associated wetlands, or within lakes, ponds, or impoundments having a surface area of 0.5 acre or greater at seasonal low water and which in any case contain fish habitat or are described by one of the following four categories:

(a) Waters, which are diverted for domestic use by more than 10 residential or camping units or by a public accommodation facility licensed to serve more than 10 persons, where such diversion is determined by the department to be a valid appropriation of water and the only practical water source for such users. Such waters shall be considered to be Type F Water upstream from the point of such diversion for 1,500 feet or until the drainage area is reduced by 50 percent, whichever is less;

(b) Waters, which are diverted for use by federal, state, tribal or private fish hatcheries. Such waters shall be considered Type F Water upstream from the point of diversion for 1,500 feet, including tributaries if highly significant for protection of downstream water quality. The department may allow additional harvest beyond the requirements of Type F Water designation provided the department determines after a landowner-requested on-site assessment by the department of fish and wildlife, department of ecology, the affected tribes and interested parties that:

(i) The management practices proposed by the landowner will adequately protect water quality for the fish hatchery; and

(ii) Such additional harvest meets the requirements of the water type designation that would apply in the absence of the hatchery;

(c) Waters, which are within a federal, state, local, or private campground having more than 10 camping units: Provided, that the water shall not be considered to enter a campground until it reaches the boundary of the park lands available for public use and comes within 100 feet of a camping unit, trail or other park improvement;

(d) Riverine ponds, wall-based channels, and other channel features that are used by fish for off-channel habitat. These areas are critical to the maintenance of optimum survival of fish. This habitat shall be identified based on the following criteria:

(i) The site must be connected to a fish habitat stream and accessible during some period of the year; and

(ii) The off-channel water must be accessible to fish.

(3) "**Type Np Water**" means all segments of natural waters within the bankfull width of defined channels that are perennial non-fish habitat streams. Perennial streams are waters that do not go dry any time of a year of normal rainfall. However, for the purpose of water typing, Type Np Waters include the intermittent dry portions of the perennial channel below the uppermost point of perennial flow. If the uppermost point of perennial flow cannot be identified with simple, non-technical observations (see board manual, section 23), then Type Np Waters begin at a point along the channel where the contributing basin area is:

(a) At least 13 acres in the Western Washington coastal zone (which corresponds to the Sitka spruce zone defined in Franklin and Dyrness, 1973);

(b) At least 52 acres in other locations in Western Washington;

(c) At least 300 acres in Eastern Washington.

(4) "**Type Ns Water**" means all segments of natural waters within the bankfull width of the defined channels that are not Type S, F, or Np Waters. These are seasonal, non-fish habitat streams in which surface flow is not present for at least some portion of a year of normal rainfall and are not located downstream from any stream reach that is a Type Np Water. Ns Waters must be physically connected by an above-ground channel system to Type S, F, or Np Waters.

*(5) For purposes of this section:

(a) "Residential unit" means a home, apartment, residential condominium unit or mobile home, serving as the principal place of residence.

(b) "Camping unit" means an area intended and used for:

(i) Overnight camping or picnicking by the public containing at least a fireplace, picnic table and access to water and sanitary facilities; or

(ii) A permanent home or condominium unit or mobile home not qualifying as a "residential unit" because of part time occupancy.

(c) "Public accommodation facility" means a business establishment open to and licensed to serve the public, such as a restaurant, tavern, motel or hotel.

(d) "Natural waters" only excludes water conveyance systems which are artificially constructed and actively maintained for irrigation.

(e) "Seasonal low flow" and "seasonal low water" mean the conditions of the 7-day, 2-year low water situation, as measured or estimated by accepted hydrologic techniques recognized by the department.

(f) "Channel width and gradient" means a measurement over a representative section of at least 500 linear feet with at least 10 evenly spaced measurement points along the normal stream channel but excluding unusually wide areas of negligible gradient such as marshy or swampy areas, beaver ponds and impoundments. Channel gradient may be determined utilizing stream profiles plotted from United States geological survey topographic maps (see board manual section 23).

(g) "Intermittent streams" means those segments of streams that normally go dry.

(h) "Fish habitat" means habitat which is used by any fish at any life stage at any time of the year, including potential habitat likely to be used by fish which could be recovered by restoration or management and includes off-channel habitat.

[Statutory Authority: Chapter 34.05 RCW, RCW 76.09.040, [76.09.]050 , [76.09.]370, 76.13.120(9). 01-12-042, § 222-16-030, filed 5/30/01, effective 7/1/01. Statutory Authority: RCW 76.09.040 and chapter 34.05 RCW. 97-24-091, § 222-16-030, filed 12/3/97, effective 1/3/98. Statutory Authority: RCW 76.09.040, 76.09.170 and chapter 34.05 RCW. 94-01-134, § 222-16-030, filed 12/20/93, effective 1/1/94. Statutory Authority: RCW 76.09.040, 76.09.050 and chapter 34.05 RCW. 92-15-011, § 222-16-030, filed 7/2/92, effective 8/2/92. Statutory Authority: RCW 76.09.040. 87-23-036 (Order 535), § 222-16-030, filed 11/16/87, effective 1/1/88; Order 263, § 222-16-030, filed 6/16/76.]